

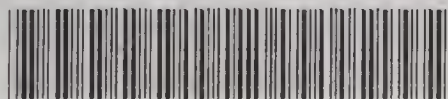
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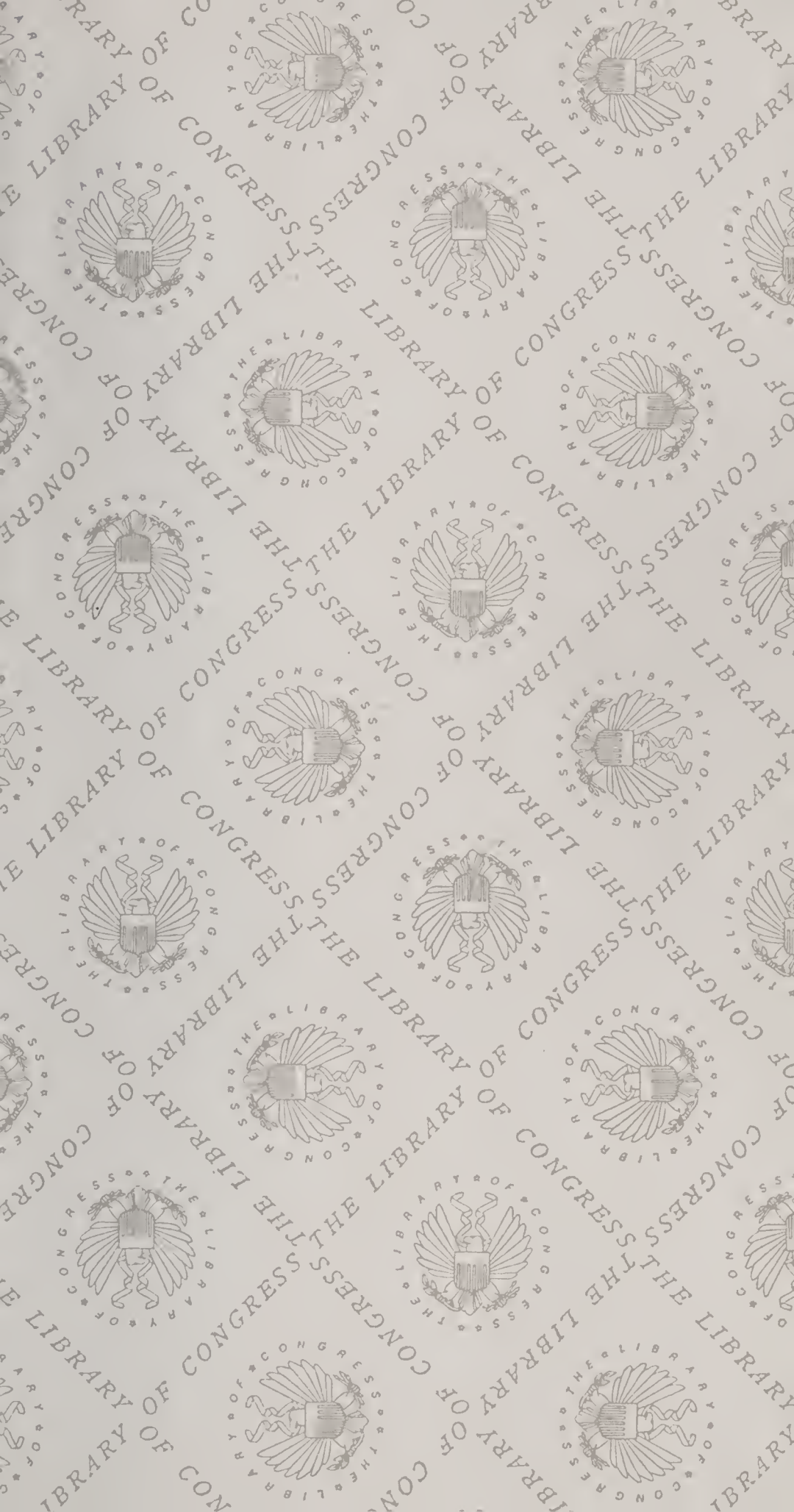
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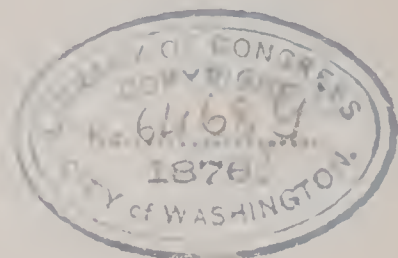
— OF —

ALCOHOLIC POISON,

AS A

BEVERAGE AND AS A MEDICINE.

✓
BY J. H. KELLOGG, M. D.
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P R E F A C E.

To attempt to demonstrate the importance of the subject of this work would be a useless task, for nothing could be more thoroughly established than is already the fact that the temperance question is one of the momentous problems of the day. It enters largely into politics, and promises to play in future a still more prominent *rôle* in the civil affairs of nations. Its growing importance cannot well be ignored by any one interested in human affairs—and who is not—and a large and very intelligent class feel and manifest the deepest interest in the subject.

Although the literature of temperance is already quite an extensive one, yet the subject is so great, and presents so many differing phases, that there still seems to be room to be occupied.

As will be seen by the table of contents, the subject is treated under eight separate heads. The several divisions are so closely related, however, that it has been impossible to confine each within rigid limits, so that slight repetitions have been necessary in two or three instances, not, however, without the addition of new matter of interest.

The first section, “True Temperance,” defines temperance, and points out the fact that indulgence in liquor is not the only means of intemperance.

In the second section are described alcohol and the processes employed by various nations to produce it.

The third section considers the effects which the use of alcohol occasions upon the various tissues of the human body.

Next is considered the “Moral and Social Effects of Alcohol,” as shown by well-known facts and statistics.

In the next section the arguments urged by the opponents of total abstinence are briefly examined.

The following section enumerates the chief causes of intemperance, and attempts to point out the true cure.

The "Medical Use of Alcohol" next receives attention, and evidence and arguments are adduced to show that the extensive use of alcohol as a medicine is unnecessary, and is productive of great injury by impeding the recovery of the sick, and supporting intemperance.

"Wine and the Bible," the concluding section, is intended to be a refutation of the arguments of those who appeal to the Bible for support of the practice of liquor-drinking.

Much care has been exercised to exclude all facts not well established, and to avoid that class of arguments which appeal more to the feelings than to the judgment. Whether the positions taken are well supported, will be determined by the candid reader by careful consideration of the arguments employed.

The author lays no claim to great originality in the subject-matter composing the work. His aim has been to present in a small compass a condensed survey of the chief points involved in the temperance question, giving to as large a number of facts and arguments as possible a systematic and harmonious arrangement. In preparing the work, he has received great aid from the writings of Dr. Wm. B. Carpenter, Dr. E. Smith, Dr. Parkes, Dr. Edmunds, Dr. Richardson, Dunglison, Pereira, Liebig, Pavy, Letheby, Bell, Black, Biddel, Headland, Patton, Lee, Miller, and numerous publications of the National Temperance Society.

Philadelphia, May, 1876.

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ALCOHOLIC POISON.

TRUE TEMPERANCE.

“Look not thou upon the wine when it is red.”—SOLOMON.

“Cattle know when to go home from grazing ; but a foolish man never knows his stomach’s measure.”—SCANDINAVIAN PROVERB.

“Every man that striveth for the mastery is temperate in all things.”—PAUL.

True temperance is the proper use of good things, and total abstinence from bad things.

“He who knows what is good and chooses it, who knows what is bad and avoids it, is learned and temperate.”—SOCRATES.

It is a grave popular error that temperance is the moderate use of everything, irrespective of quality. Good things may become evil when used in excess, on account of quantity. The most wholesome food may cause serious diseases when thus abused. There is another class of substances which are intrinsically bad. They are evil, and only evil, in all proportions and quantities. They have no redeeming qualities. The slightest indulgence in these articles is intemperance. The glutton, the gormand, the ep-

icure, is intemperate because he abuses, by excessive use, that which might nourish him if taken with moderation. The tippler or wine-bibber is intemperate, not because he uses wine or brandy in great quantities, but because he takes even the smallest portion of the poisons. The boy who robs an orchard is a petty thief. The official who puts his hand into the national treasury and abstracts the public money is a defaulter. Each individual is a thief. Both are criminals of the same class. They differ only in the degree of the crime committed. They stand, respectively, at the two ends of a long series of gradations which all incline in the same direction.

Intemperance presents two similar extremes. At one end is the man who takes his daily or occasional glass of wine or beer—just to make him “feel well,” or “for his stomach’s sake”—and at the other is seen the confirmed inebriate reeling into a drunkard’s grave. Both individuals stand in the same line; their names belong in the same category. Moderate drinkers—as small tipplers term themselves—really differ from beer-guzzlers, toppers, and “old soakers,” in only one particular. The first have taken only a few degrees, only the initiatory, perhaps, while the latter are nearly ready to graduate in ignominy. The moderate drinker has only to continue his course in the same direction in order to bring up at last in the same slough with other wretched victims of intemperance.

The Sin of Intemperance.

Primarily, the crime of intemperance is a sin against the body. The moral evils which result are the natural consequences of injuries suffered by the physical organism. The act of drinking, itself, is not a sin, whether the liquor taken is beer, wine, or brandy, or be the individual a hod-carrier or a clergyman; no criminality can be attached to a mere mechanical act. The real sin consists in subjecting the body to *unnatural and harmful stimulation*. Nature has given to each organ of the body its proper function. When allowed to act unrestrained, these functions are all properly performed, and harmony reigns in the vital domain. But so soon as any organ or set of organs is unduly excited, the harmony is destroyed, and discordant action results. A whole train of ills then follow as immediate consequences of the disturbed action. The mental and moral evils which result from the use of intoxicating liquors are the direct consequences of the first sin against the body, *artificial stimulation*.

Tea, Coffee, and Tobacco Drunkards.

Alcoholic liquors are not the only means by which artificial stimulation may be indulged. A large number of drugs and poisons possess properties which are capable of occasioning the same results. Tobacco, opium, hashish, tea, coffee, and absinthe are some of the more common

of these. The effects of these several agents may be said to be essentially the same in kind, though some of them are doubtless productive of more injury than others. True temperance discards all of these poisons. They all go together. It is a question upon which there is considerable division of opinion, whether rum or tobacco is productive of the greatest amount of injury to the human family. We will not here discuss the relative importance of a reform in the two directions. Both are great evils. Both will stand or fall together.

Dr. Arlidge, of England, has recently called attention to the fact that tea drunkards are very common among the women of the laboring classes of that country, and every physician knows that similar cases are not uncommon in this country.

True Temperance Platform.

The only true platform upon which the cause of temperance will ever find a substantial basis is total abstinence, not only from alcoholic drinks, but from every other stimulant or narcotic. There is no room for compromise on this subject. Christian temperance is more radical still, and requires that the appetite shall be held within the bounds of moderation in eating as well as in drinking.

WHAT IS ALCOHOL?

THE chemist describes alcohol as a liquid technically known as *hydrated oxide of ethyl*, containing two atoms of carbon, six of hydrogen, and one of oxygen, and represented by the formula, C_2H_5HO . It is colorless, when pure, and very inflammable, burning with a pale blue flame. It belongs to the same class of chemical compounds with naphtha, turpentine, benzine, fusel oil, kerosene, and burning fluid. It is seldom found pure, usually containing from five to fifty per cent of water, besides various impurities, chief among which is fusel oil, another variety of alcohol.

Origin of Alcohol.

The Creator never made alcohol. No plant upon the face of the earth produces it. No bubbling spring affords it. It is one of the products of vegetable decomposition and decay. The process of making it is termed fermentation. Thus, the fermentation of wine and beer, the working of cider, and the "raising" of bread are familiar illustrations of the production of alcohol.

Wine is made by fermenting the juice of grapes or raisins. By means of distillation, the alcohol may be separated from the wine, and is then known as brandy.

Beer is made from barley and hops. The bar-

ley is first steeped for some hours at a moderate heat, and is then allowed to germinate. After germination has been in progress for a few days, the starch contained in the grain is converted into sugar, which is then fermented with hops and yeast, by which means the sugar is converted into alcohol. The dark colored liquor resulting from the process is made up of water, alcohol, and various impurities, together with a poisonous substance called *lupulin*, derived from the hops.

Whisky is made by the fermentation of any kind of grain, potatoes, turnips, or any other vegetable containing starch.

Rum is made by fermenting cheap molasses.

Cider is the fermented juice of the apple. It contains alcohol as soon as it has become in any degree "hard."

In Tartary, an alcoholic drink called *koumiss* is made by fermenting milk.

A kind of wine is made in many tropical countries from the fermented juice of the palm tree.

Honey wine, a fermented solution of honey, is used in Abyssinia.

Each country has its peculiar intoxicating beverages, which are all alike in the one particular of containing alcohol.

What Is Fermentation?

Fermentation is one of the stages of vegetable decomposition. It is the putrefaction or death of the vegetable product undergoing the change. Alcohol is produced as a result of decay. The

process is excited and maintained by certain microscopic plants or animals, the germs of which are always present in the air ready to develop into active life when favorable conditions of warmth and moisture are supplied. Through the action of these minute bodies, sugar or starch is decomposed into alcohol, carbonic acid, and water.

The following table shows the proportion of alcohol found in various drinks:—

	per cent.		per cent.
Small beer, . . .	1 to 3	Whisky,	40
Cider,	5	Brandy,	50
Wine,	7 to 20	Proof spirit,	50
Ale,	10 to 20	Rum,	58

Nearly all liquors contain other poisons, to which some of their deleterious properties are attributable. Thus, beer and ale often contain tobacco, COCCULUS INDICUS, and green vitriol. Brandy and whisky contain fusel oil and tannic acid. Immense quantities of wine are made artificially, by diluting alcohol, and flavoring and coloring it in such a way as to deceive the most expert.

Alcohol is very extensively used by physicians. A very large class of medicines is largely composed of it.

Composition of Bitters.

Besides the large class of alcoholic liquors which are distinctly recognized as such, there is another class of compounds of which alcohol is the chief constituent, but which are commonly sold under the alluring titles of bitters, tonics,

restoratives, etc. Some of them even claim to be free from alcohol while containing it in notable quantities. The following table shows the amount of alcohol in some of the more common of these filthy mixtures:—

	per cent.
Richardson's Bitters,	59
Hostetter's Stomach Bitters,	43
Plantation Bitters,	30
Puritan Bitters,	25
Quaker Bitters,	23
Temperance Bitters (!)	17
Vinegar Bitters,	7½
Pierce's Bitters,	6½

The above table was prepared from the official report of the State assayer of Rhode Island. The chief point of difference between these various alcoholic compounds is in the different proportions of alcohol which they contain.

It will be noticed that one of the "bitters" noticed above, Richardson's, contains more alcohol than the strongest rum. "Temperance Bitters" is more than one-sixth alcohol; and "Vinegar Bitters," the manufacturers of which publish a temperance almanac to advertize it, and claim that it is absolutely free from alcohol—contains more alcohol than small beer, hard cider, or light wine. These bitters, with scores of others, have an immense sale, thousands making habitual use of them who profess to be total abstainers. Several of them are kept on the counters of the bar-keeper as regularly as "Holland Gin," "Jamaica Rum," or "Old Rye."

PHYSICAL EFFECTS OF ALCOHOL.

By "physical effects" we mean the effects of alcohol upon the human body. We shall condense, under this head, the observations of scientific men, which are very clear and decisive upon this point. In considering this question, it should be borne in mind that scientific facts are not mere opinions; they have a more substantial basis. They are deductions from careful and repeated experiments conducted by men trained to accurate observation.

Alcohol an Irritant.

Apply to the skin a small compress saturated with alcohol, covering it with oiled silk to prevent evaporation; in a few minutes the skin will be reddened and irritated as though a mustard plaster had been applied.

Take into the mouth a tablespoonful of alcohol. In a few minutes the whole mucous membrane is blistered and benumbed.

The mucous membrane of the stomach is far more delicate than either the skin, or the membrane of the mouth. Alcohol blisters and benumbs it in the same way, only much more severely. Dr. Beaumont had the privilege of studying the effects of various substances upon the

stomach of Alexis St. Martin, a wounded soldier, the interior of whose stomach was exposed to view through an opening in the abdomen. St. Martin had been addicted to the use of liquor, and sometimes broke away from the restraints imposed upon him by the doctor's experiments, and indulged his appetite for alcoholic drink. After these occasions, Dr. Beaumont always noticed that the mucous membrane of the stomach was greatly congested. Even the use of a small quantity of alcoholic drink was sufficient to produce an inflamed appearance, while greater excess caused the stomach to present a surface swollen and roughened with inflammation, with numerous black patches of deadened tissue, and ulcers.

Notwithstanding this terrible condition of his stomach, St. Martin was scarcely conscious of any disturbance, and thought himself as well as usual! Why was this? Because the stomach has few nerves of general sensibility, and suffers long before it remonstrates.

The stomach of an habitual drinker resembles pounded beefsteak more nearly than any human tissue.

Alcohol a Powerful Narcotic.

The best of medical authorities agree that this drug is a most powerful narcotic. It deadens the sensibility of the nerves, like ether, chloroform, and nitrous oxide. Chloroform and ether are both compounds which are made from alcohol.

Half an ounce of alcohol held in the mouth a few minutes will so deaden the nerves of taste that they can appreciate no difference between salt and sugar, between sour and bitter. When alcohol is taken into the blood, it produces a similar condition in the brain and all the great nerve centers.

Says Dr. E. Smith, of alcohol, "I hold that its action, in all doses, is always that of a narcotic and paralyzer."

Alcohol Destroys the Blood.

When this fiery drug is taken into the stomach, it is soon absorbed into the circulation, where it comes in contact with the corpuscles of the blood. The effect upon these delicate and important structures we can study by applying alcohol to the blood outside of the body; for the corpuscles will retain their life and activity for several weeks after being removed from the body, if placed under proper conditions. To make sure of no mistake about this matter, we will do the experiment while we write. Our microscope, which will magnify one million times, being in readiness, we thrust a needle into a finger and thus obtain a tiny drop of blood. Placing it upon a glass slide, we adjust it upon the instrument and look at it. Although the film of blood in view is so thin as to be transparent, it is crowded with beautiful bi-concave discs, the red blood corpuscles, each of which is perfectly

formed, though only 1-3500 of an inch in diameter. Now we apply a drop of alcohol, a very tiny drop; mark the effect. No sooner does it touch these little bodies than they begin to shrink, and soon lose all resemblance to their natural appearance. In a short time they are seen to be breaking up into fragments; and in five minutes from the commencement of the experiment the once beautiful and symmetrical little bodies which compose one-half of the blood, are reduced to broken fragments and shapeless masses. They have been fairly eaten up and cut in pieces by the alcohol.

“But what harm does this do?” says the drunkard, or the moderate drinker. The ultimate effect is the same as though the supply of air was cut off from the lungs by a cord tightly drawn around the neck. The business of the red corpuscles is to carry oxygen from the lungs to the tissues. If they are destroyed, oxygen cannot be carried in sufficient quantity, and the blood becomes foul. This is the cause of the dark color of the blood in spirit drinkers.

In addition to its effect upon the blood corpuscles, alcohol greatly injures the nutrient elements of the blood, destroying their nutritious qualities, and increases the proportion of fat in an astonishing degree. The natural proportion is 1-500; the blood of spirit drinkers has been found to be more than 1-7 fat.

“It is also probable that it acts in the same

way as quinine in interfering with the migration of blood corpuscles through the vascular walls.”
—LONDON LANCET.

Alcohol Causes Heart Disease.

When alcohol is taken into the blood, it soon comes in contact with the nerve centers which govern the action of the heart. Its effect is the same as upon other nerve centers. It paralyzes them, just as chloroform does the brain. Then the heart is like a steam engine without a governor, or a clock from which the pendulum weight has been removed. It runs down with wonderful rapidity. This unnatural activity soon induces disease.

In addition to this, the fatty particles which are so abundant in the blood of a spirit drinker are deposited in the walls of the heart in the place of the muscular tissue which should compose them. The walls are thus weakened, and are liable at any time to rupture. It is a fact well known to physicians that this is one of the most common causes of heart disease. We have seen scores of cases of heart disease in the large hospitals of New York, the larger share of which were in persons addicted to the use of liquor.

Alcohol a Cause of Apoplexy.

The fatty particles contained in the blood are very liable to be deposited in the walls of the arteries, as well as in those of the heart. The arteries of the brain are more frequently the seat

of this morbid process than any others, their coats often becoming so thoroughly diseased as to be little else than fat. They are, in consequence, greatly weakened, and an extra strain, caused by a sudden afflux of blood to the head, is liable to cause a sudden rupture of the weakened vessels, which is apoplexy. Moderate drinkers, as well as those who imbibe to great excess, are exposed to danger from this cause.

Alcohol Lessens Muscular Strength.

The use of alcohol, even in moderate doses, lessens the muscular strength of an individual, first temporarily, and then permanently. Actual experiments have shown repeatedly that a man cannot lift so much immediately after drinking an alcoholic liquor as he could before.

Dr. Parkes gave a strong healthy man only water for drink for three days, and kept him digging earth as hard as he could. The average number of heart-beats was sixty-six per minute. Then he worked three days more in the same manner, only taking twelve ounces of brandy each day. The average number of heart-beats during the latter period was seventy-one per minute. The soldier began with the belief that he could work easier with brandy than without it; but he entirely changed his opinion. He stated that during the first two days he thought the brandy made him feel as though he could accomplish more; but when he attempted

to do it, he found himself unable to succeed. On the third day he was feverish and thirsty, had palpitation of the heart, and was obliged to stop his work very often because "his breathing was not good."

The same thing has been repeatedly demonstrated in cases in which total abstainers have been brought into competition with drinkers, in trials of endurance. When other circumstances have been equal, the teetotalers have always come off victorious in such contests.

Says Dr. Brinton, a recognized medical authority, "Even a moderate dose of beer or wine diminishes the *maximum* weight which a person can lift to something below his teetotal standard." Facts obliged Dr. Brinton to make this statement, though himself not a teetotaler.

Dr. E. Smith, F. R. S., refers to "the diminution of muscular power" as one of the properties of alcohol, and adds, "In whatever dose, the direction of the action of the alcohol must be the same."

Alcohol permanently destroys muscular power by occasioning fatty degeneration of muscular tissue. The same change which occurs in the heart and arteries, also occurs in the voluntary muscles. The proper tissue is replaced by particles of fat, which possess no vital properties, and have no contractile power. A drunkard may appear to be strong and muscular when his muscles are little else than useless masses of fat.

Alcohol a Cause of Aneurism.

Aneurism is a fatal disease of the blood-vessels chiefly affecting the large arteries of the chest. It is caused by a weakening of the arterial walls, through degeneration. The weakened walls become distended, thus forming a huge tumor, which continues to enlarge until rupture occurs and the patient suddenly dies from hemorrhage.

We have been informed by physicians of the largest experience in public hospitals that the use of alcoholic drinks is one of the chief causes of this disease. Diseases resulting from the "social evil" are the next most frequent cause; and it would not be unfair to attribute these to the indirect influence of alcohol; for it will be admitted that the latter is the chief supporter of brothels and licentiousness.

Drunkards' Consumption.

Several years ago, it was pointed out by Dr. B. W. Richardson, of London, that alcohol produces a peculiar form of pthisis, or consumption, which is one of the great causes of death among the intemperate classes. Drunkards' consumption is a recognized disease.

Alcohol Wastes Vitality.

Many claim that alcohol is a stimulant. But what is a stimulant? Is it that which adds to a man's store of vitality? does it increase force? No; a stimulant expends force, but does not man-

ufacture it. A stimulant is to the system precisely what a whip or spur is to a tired horse. It excites, but does not strengthen. The excitement produced by a stimulant is always followed by a condition of depression corresponding to the degree of the previous excitement. There can be no possible doubt of the fact, that, whether a stimulant or a narcotic, alcohol abstracts vitality.

Dr. Parkes and Count Wollowicz conducted a series of experiments upon a young, healthy man to ascertain the effect of alcohol upon the heart. They found that under the influence of half a pint of spirit the heart was obliged to do one-fifth more work than when only water was taken. Of course this extra labor was uselessly expended, and occasioned a great loss of vital force which might have been available in some other direction had it not been thus exhausted. Every person who imbibes alcohol, in any form, must be subject to this constant loss of vitality.

“I see clearly how they [alcoholic drinks] decrease animal power.”—RICHARDSON.

Alcohol Decreases Animal Heat.

Says Dr. W. B. Richardson, a renowned English physician, “The introduction of alcohol into the body in frequent and small doses which do not produce intoxication, is attended with reduction of temperature.”

“Their general action is quickly to reduce animal heat.”

“When administered to intoxication, temperature is lessened from 3° to 6° .”—DOBELL.

After taking a dram of liquor the drinker feels an apparent increase of heat ; but the thermometer shows that the temperature is actually diminished.

Alcohol a Cause of Diseases of the Stomach.

A drunkard is certain to become a dyspeptic. Alcohol tans the stomach, rendering it inactive, and causing atrophy of the glands which form the gastric juice. The supply of this digestive fluid is thus diminished. Alcohol precipitates the pepsin from the gastric juice, and so renders useless that which is secreted. Digestion cannot progress while alcohol is in the stomach, being delayed until the poison can be absorbed.

Alcohol does more ; it causes inflammation of the stomach, foul ulcers, and cancerous disease of the organ. Not long since we saw in Bellvue Hospital, New York, a case of most violent gastritis produced by taking a small quantity of alcoholic drink. The patient was a woman, and for several days she was unable to retain any food in the stomach. Nutrition was maintained by nutritive enemata. The most obstinate cases of gastric ulcer are found in drunkards.

Alcohol a Paralyzer.

Yonder sit a party of a half dozen Frenchmen, prepared for an after-dinner celebration of Bacchus. Three long-necked, green bottles occupy

the center of the table, around which the party are clustered, and before each individual is a goblet filled with a sparkling, purple liquid. Now each goblet is raised, all clink together an instant, and then the contents are drained by lips evidently well accustomed to the beverage. The empty goblets are passed to the waiter to be re-filled, and one of the party raises his voice in a melodious solo of one of his national airs. All join the chorus, and there is real harmony in the music.

The song ended, another glass is drank. Another song follows; this time it is a comic song. Now every face is flushed; every one feels "jolly." What has the wine done? Strictly speaking, it has, of course, done nothing, being merely the occasion of action on the part of the system. But, overlooking technicalities, what has happened? Alcohol was taken into the stomach, was absorbed into the blood, was carried to the heart, and thence was distributed to the body. It came at once in contact with the nerve centers that control the circulation by regulating the size of the small arteries. It poisoned them, rendering them partially incompetent to perform their function. They let go their hold of the arteries, which, in consequence, became relaxed and distended. The flushed cheek means, *paralysis of the nerve centers*. In the confirmed inebriate this condition becomes permanent in the nose, which enlarges in consequence of receiving an ex-

tra supply of blood, and produces the well-known characteristic "rum blossom."

But what is the significance of the ruddy countenances of our reveling Frenchmen? It indicates a similar condition throughout the whole body. The muscles, the nerves, the mucous membrane, the brain, every tissue in the body, is "blushing" under the paralyzing influence of alcoholic poison.

The drinkers are jolly, because an increased amount of blood in the brain occasions for a brief time an increased activity. How glibly they talk, now that their song is done. Every man has a joke, an amusing story, or a pun. Another drink. Now another song, a foolish, silly jumble of senseless words and tuneless notes. More wine, more jokes, more simple songs, and simplicity gives place to imbecility and smut. The ribald joke and obscene laugh betray the fire of lust within.

More drink. Each face wears now a beastly look, a silly glare. A senseless joke provokes a still more senseless grin. In turn, each one attempts to sing. The croaking of a meadow frog were better music. They utter hoots, and grunts, and yells, and other uncouth sounds, contort their features, fling their arms about, and act so like a herd of apes or simpering idiots that groups of children crowd around the court-yard wall and view them through knot holes and crevices as though they were performing dogs or circus clowns.

And how has alcohol wrought this? The same word, paralysis, explains the matter. The will, the wit, the judgment, now are *paralyzed*. The passions have full sway, and foolishness runs riot.

One more drink. The bottles are drained at last, and now they leave their feast and stagger off. What means the tottering gait, the unsteady walk? *Paralysis*, again, must be the answer. The fiery poison in the blood has reached the little brain, the cerebellum, which lies at the base of the skull and regulates the act of walking, acting as a balance wheel. It now is paralyzed, and hence the unsteady, swaggering, and unbalanced gait.

It was well that our convivial Frenchmen had no more wine to drink; for had they continued to imbibe, complete paralysis would have reached the larger brain, the cerebrum, and then they would have fallen to the floor, "dead drunk," insensible. Sometimes this drunken, paralytic sleep extends into eternity. From the first sip to the last draught, the work of alcohol within the body is *paralysis*.

A Drunkard's Brain.

The brain, when healthy, is so soft that it would not retain its shape but for the skull. The sharpest knife is required to cut it without mangling its structure. It is necessary to immerse the organ in alcohol for weeks or months

in order to harden it when a careful examination is essential. A drunkard's brain presents a marked contrast. It is already hardened, pickled almost. In the dissecting room, it affords rare pleasure to a medical student to secure the dessicated brain of an old toper. The quantity of alcohol in the brain is sometimes so great that it can be collected by distillation after death.

The Drunkard's Liver.

The appearance of a drunkard's liver is even more characteristic than that of the brain. "Hob-nailed liver" is another name for the diseased organ as found in spirit drinkers. It is shrunk, hard, and almost totally useless, insensible alike to pain, and to proper sensibility. Externally it looks like the hob-nailed sole of an English cartman's shoe, from which resemblance it received its name.

This kind of liver is found in those who have indulged in drink for several years. The livers of more moderate drinkers are found filled with fat.

Alcoholic Degeneration.

The presence of alcohol in the body occasions degeneration of every tissue. Not one escapes. The most common form is *fatty degeneration*, of which Dr. T. K. Chambers says, "Three quarters of the chronic illnesses which the medical man has to meet, are occasioned by this disease."

Fatty degeneration of the heart and arteries occasions sudden death from heart disease, aneurism, and apoplexy. Fatty degeneration of the liver and kidneys occasions fatal disease of those organs.

Degeneration of the nerves also results in fatal disease. That hopeless malady, *locomotor ataxia*, originates in degeneration of the cerebellum or spinal cord.

Effects of Moderate Drinking.

Moderate drinkers do not escape. "Chronic alcoholism" is the disease which fastens upon them, and its symptoms are as distinct as those of any other disease. Gout and rheumatism are the special patrons of the moderate toppers, the wine-bibbers. Neuralgia is another comforter of small tipplers. General nervous debility and dyspepsia also find a great proportion of this class among their victims.

It is quite useless for moderate drinkers to suppose that by using alcohol in small quantities they escape its evil effects. It is a poison in all doses. As Dr. Smith says, "In whatever dose, the direction of the action of the alcohol must be the same."

Says Dr. Chambers, "The action of frequent divided drams is to produce the *greatest amount of harm* of which alcohol is capable, with the least amount of good." It may be said, without exaggeration, that moderate drinking occasions

all the ill effects of intemperance ; for every drunkard begins his course as a moderate drinker.

James Miller, in his work on Alcohol, says, "Alcohol to the working human frame is as a pin to the wick of an oil-lamp. With this you raise the wick from time to time, and each raising may be followed by a burst of brighter flame ; but, while you give neither cotton nor oil, the existing supply of both is, through such pin-work, all the more speedily consumed."

Summary of the Physical Effects of Alcohol.

We have not enumerated all the physical evils which result from the use of alcohol, but have noticed as many as our space will allow. The following is a brief summary of the chief effects noticed :—

1. It is an irritant poison. It will blister the skin and the mucous membrane when properly applied.

2. It is a narcotic, paralyzing the nerve centers, the nerves, and the brain.

3. It destroys the blood corpuscles, and renders them incapable of carrying oxygen when it does not destroy them entirely.

4. It causes an increase of fat in the blood to more than seventy times the natural amount.

5. The unnatural amount of fat thus carried by the blood of spirit drinkers is deposited in the heart and arteries in the place of the proper

muscular tissue, occasioning heart disease, apoplexy, and aneurism—and sudden death.

6. The same kind of degeneration affects the voluntary muscles, rendering them permanently weak.

7. It occasions degeneration of the liver and kidneys, and resulting fatal diseases.

8. It produces various nervous disorders as the result of degeneration.

9. It lessens muscular strength.

10. It occasions cancer, ulcer, dyspepsia, inflammation, and other diseases of the stomach.

11. It hardens the brain.

12. It wastes vitality.

13. It paralyzes the nerves, and destroys the will and judgment.

14. It is an acrid, corroding poison, and a universal evil in the vital domain.

15. Its effects are the same in kind, whatever the dose, differing in degree according to the quantity taken, and the susceptibility of the user.

MORAL AND SOCIAL EFFECTS OF ALCOHOL.

The Great Cause of Crime.

IT has been estimated by competent judges that intemperance is the cause of nine-tenths of all the crime among civilized nations. Alcohol benumbs the intellect, deadens conscience, and stifles reason. It leads its victim to theft to secure the means of indulgence, and steels the heart of the assassin for his bloody work.

To the crimes committed by the users of alcohol, themselves, should be added those committed by the wives and children of drunkards, who are driven to desperation and crime by the want and suffering occasioned by the cruel monster, drink.

The influence of liquor in increasing crime has often been well illustrated by the sad results which have invariably followed its first introduction into any community. Many newly settled districts have existed for several years with entire exemption from crime ; no murders, no thefts, no public broils, no assaults upon persons or property, no act of violence of any kind occurring to mar the peace and destroy the feeling of security of the community. At last a public house is opened in the midst of this prosperous and peace-

ful society, and a bar is erected, from which alcoholic liquors are dispensed. The evil consequences are immediately apparent. Drinking engenders idleness. Idleness necessarily brings want, and want leads to theft; for a man who spends money for illegitimate purposes will not long continue particular to obtain his means from legitimate sources. Idleness and the conscience-searing, passion-stimulating influence of alcohol soon lead to acts of violence against persons and disregard of individual rights. Midnight carousals and drunken revels become frequent, out-breaking crimes are not uncommon, and the once peaceful community becomes a scene of constant disturbance and disquiet. The sheriff and constable, who previously found no occasion for the exercise of the functions of their offices, now find constant employment. A jail becomes a necessity, and is never without an occupant.

†To say that alcohol is responsible for the revolution in the condition of such a community would be to state a fact too plain to be mistaken.

Another evidence of the influence of liquor-drinking upon crime is seen in the fact that crime increases and decreases in any particular locality almost in proportion to the increase and decrease of the use or sale of liquor.

During seven years, from 1812 to 1818, the annual consumption of liquor in England and Wales was 5,000,000 gallons; during the same period, 11,000 persons were annually arrested

and committed for trial. During the seven years from 1826 to 1832, 9,000,000 gallons of liquor were annually consumed, and the annual number of arrests was 21,700. It will be observed that the amount of liquor sold during the last period was almost double that consumed during the first, and also that the number of arrests was nearly doubled during the last period. That this increase of crime was due to the influence of liquor and not to increase of population, is shown by the fact that while crime had doubled, the population had increased but one-third.

Says Dr. Nott: "In Scotland, in 1823, the whole consumption of intoxicating liquors amounted to 2,300,000 gallons; in 1837 to 6,776,715 gallons. In the meantime, *crime increased 400 per cent.*, fever 1,600 per cent., death 300 per cent., and the chances of human life diminished 44 per cent."

"In Ireland, when the distilleries were stopped, in 1808, crime decreased amazingly. Again, when in 1810 they recommenced operations, the commitments increased nearly fourfold."— *Bachus Dethroned*.

The increase of crime incident to the increased use of liquor is, of course, due to the influence of alcohol upon the moral nature of individuals. The direct effect of this poisonous drug seems to be to paralyze the will, to render the sensibilities obtuse, to deaden the conscience, to inflame the passions, to weaken the judgment, and to de-

throne reason. Kleptomania (an uncontrollable disposition to steal) is one of the acknowledged effects of drink.

It is a well-established fact that the "social evil" is largely supported by the use of liquor. Brothels and public houses are frequently connected. Liquor and licentiousness go hand in hand.

Alcohol as a Cause of Disease.

A very large proportion of the diseases to which man is subject are directly produced, or greatly aggravated, by the use of alcohol. The following is a partial list of those which have been directly traced to alcohol by Dr. Carpenter and other eminent medical men:—

Gout, rheumatism, heart disease, dyspepsia, disease of kidneys, dropsy, obesity, disease of the liver, apoplexy, degeneration of the muscles, tremors, ulcers, insanity, palsy, jaundice, epilepsy, consumption, melancholy, cancer, amaurosis, paralysis, hysterics, convulsions, gastritis, enteritis, ophthalmia, carbuncle, boils, fatal obstruction of lacteals, tabes, syncope, diabetes, lock-jaw, idiocy, impotency, mania, delirium tremens, Bright's disease, disease of the arteries, atrophy of the liver, congestion of the liver, and numerous other organic and functional derangements.

We were informed by one of the visiting physicians of Bellvue Hospital, New York, that at least two-thirds of all the diseases treated there originated in drink.

Intemperance and Insanity.

Intemperance, more than any other cause, fills our lunatic and idiot asylums. According to the statistics of insanity in France, thirty-four per cent. of the cases of lunacy among males were due to intemperance. One-half of the inmates of the Dublin insane asylum owe their disease to the use of liquor.

Lord Shaftesbury, chairman of the English Commission on Lunacy, in his report to parliament stated that six out of every ten lunatics in the asylums were made such by alcohol.

Dr. S. G. Howe found that the parents of one hundred and forty-five out of three hundred idiots were habitual drunkards.

The Use of Alcohol Shortens Life.

It is very easy to prove that the influence of alcohol, as of every other poison, is to shorten life. Dr. Willard Parker, of New York, shows from statistics that for every ten temperate persons who die between the ages of twenty-one and thirty, fifty-one intemperate persons die. Thus it appears that the mortality of liquor-users is *five hundred per cent. greater* than that of temperate persons. These statements were based on the tables used by life insurance companies.

According to the calculations of life insurance experts, the expectancy for life of a temperate person at the age of twenty years is forty-four years. The expectancy of an intemperate person, at the same age, is only fifteen years.

Between 60,000 and 100,000 persons die annually in this country alone from the effects of liquor. The same number die in England from the same cause. Then in these two Christian countries a human being dies every two and one-half minutes from alcoholic poisoning.

The graves of the victims, allowing twelve square feet for each, would in fifty years nearly cover a township. Arranged end to end, their coffins would make a continuous line from Cape Horn to the North Pole.

Arranged in one long funeral procession, with a hearse and a single vehicle for mourners for each, this vast army of dead drunkards would occupy two and a half years in passing a given point, and would wind two and one-half times around the globe.

Alcohol Predisposes the System to Disease.

Dr. Anderson, of Glasgow, says, "I have found the use of alcoholic drinks to be the most powerful predisposing cause of malignant cholera with which I am acquainted. In Warsaw, ninety per cent. of all who died of cholera during the epidemic of 1832 were habitual drinkers." In the city of Tiflis, containing 20,000 inhabitants, every drunkard was swept away by cholera. In the Park hospital, New York, there were two hundred and four cases of cholera during an epidemic of the disease. Of these, only six were temperate, and they recovered, while two-thirds of the remainder died.

“Four-fifths of those who were swept away by the dreadful visitation of the cholera in 1832 were addicted to intoxicating drinks.”

The whole population of St. Petersburg and Moscow ceased drinking liquor, being convinced that it was almost certain death to continue its use.

M. Huber said, “Persons given to drinking were swept away like flies.”

Alcohol predisposes to other diseases as well as cholera. A very slight injury to an intemperate man is likely to result fatally. Surgeons in city hospitals find that they cannot expect the same degree of success in operations upon drinkers that they expect in the cases of temperate persons, a very slight operation, which would have occasioned no inconvenience in a total abstainer, often ending fatally.

Hereditary Effects of Drunkenness.

The drinker himself is not the only sufferer from his vice. Indeed, it seems in many cases that he is not the greatest sufferer. He may even live out his threescore years and ten, in apparent defiance of the laws of nature, and the warnings of friends; but look at his children. Are they as strong and robust as he? Oh! no; instead, we often see them frail, nervous, imbecile, idiotic, poor specimens of the race. The iniquities of the father are visited upon the children.

“There are those [thousands] who have had

diseased physical organisms bequeathed to them, and they are suffering from an irritable brain and an eccentric habit of thought, because their fathers drank spirits.”—DR. EDMUNDS.

Amount of Liquor Annually Manufactured.

The amount of liquor annually manufactured and consumed in the United States reaches the enormous total of more than 260,000,000 gallons. About 12,000,000 gallons more are imported from foreign countries. This statement covers only the amount reported to the revenue officers. Immense quantities are made and not reported, and considerable quantities are smuggled into the country. This immense quantity of liquid poison would make a lake ten feet deep, twenty rods wide, and a quarter of a mile long.

According to a scientific authority, the wine product of France this year would make a ditch three and one-half feet deep, of the same width, and 4,000 miles long.

Liquor Costs More than Bread.

The cost of liquor to consumers, in the United States, for the year 1867, has been officially estimated at \$1,483,491,865. The lowest estimate for the year 1872 is \$735,000,000. Fourteen hundred million dollars would buy seven barrels of flour for every man, woman, and child in the country; 28,000,000 teams would be required to draw the flour. This great caravan would wind five times around the earth if arranged in single

file. Fourteen hundred million dollars, in one dollar bills, would completely cover two townships. If the bills were joined at the ends, they would make a ribbon nearly long enough to reach to the moon.

The value of all the food products of the United States for a single year is \$600,000,000, or less than half the cost of alcohol. The cost of all the clothing is less than \$400,000,000, or less than one-third the cost of alcohol.

The annual consumption of liquor amounts, according to the estimate for 1867 by commissioner Wells, to \$37.00 for each man, woman, and child in the United States.

According to the Census Returns of 1870, the annual value of all our agricultural and manufactured products and improvements was during that year nearly \$6,680,000,000. Taking this as the annual average, we find by commissioner Wells' report that in five years the cost of liquor would exceed even this vast sum, amounting to more than \$7,000,000,000. The country would then be better off if the liquor traffic were abolished than if, once in five years, a great conflagration should reduce to ashes the products of the labor of all its numerous industries.

All this, and millions more, is annually wasted. Is it not clear, then, that the use of alcoholic liquors is one of the greatest curses of civilization? It is the bane of morality, and the greatest cause of pauperism.

THE DRUNKARD'S ARGUMENTS ANSWERED.

1. Alcohol Is Food.

THE aristocratic toper, who wishes to give an air of respectability to his vice, will claim that alcohol is a food. He will cite, in proof, instances in which persons have lived for weeks by the aid of no other nutriment, taking nothing but alcohol and water. This semblance of argument scarcely needs exposure; for the most that can be claimed is that it proves merely that persons have lived several weeks while taking only alcohol and water. The fact that individuals have in several instances been known to live from thirty to sixty days while taking only water, shows conclusively that those persons who lived a shorter time on brandy and water lived in spite of the alcohol instead of by the aid of it. A conclusive evidence that alcohol is not a food is found in the fact that when taken into the system it undergoes no change. It is alcohol in the still, alcohol in the stomach, alcohol in the blood, alcohol in the brain, in the liver, in all the tissues, and alcohol in the breath, in the perspiration, and in all the excretions. In short, alcohol is

not used in the body, but leaves it, as it enters, a rank poison.

“I can no more accept them as food than I can chloroform or ether.”—RICHARDSON.

2. Alcoholic Beverages Preserve the Body.

Alcohol is a powerful antiseptic. An apple or the body of an animal placed in the fluid, cannot undergo decomposition. From this, some lovers of the article are very ready to infer that the use of alcohol will prevent decomposition of the tissues of the body, and thus tend to its preservation. A greater fallacy could not be conceived. Corrosive sublimate, blue vitriol, copperas, and carbolic acid are excellent antiseptics; but who would think of taking either of these articles for the purpose of prolonging life?

But if alcohol did really hinder the destruction of the tissues, so as to prevent the natural process of disintegration, it would still be very injurious; for all the processes of life are dependent upon destructive changes of tissue; and hence, anything which would hinder this process would hinder vital action, would interfere with the life processes which are essential to the manifestation of life.

But it can be shown that the evidence upon which the scientific advocates of the use of alcohol base their arguments is quite unsatisfactory. They claim to find that the body wastes

less while a person is using alcohol than when abstaining, the other conditions being the same. Hence, they tell us alcohol prevents vital changes, and so saves the body from wearing out. With this view they recommend the use of liquor to those who are obliged to undergo any hardship, or to perform any severe physical labor.

Let us examine this argument. It is found that the urine and other excretions contain less of the worn-out material of the tissues when a person is using alcohol, than when he is abstaining. From this alone it is concluded that alcohol prevents the wearing out or disintegration of tissue—a most astonishing conclusion. No one but a man stoutly prejudiced in favor of alcohol would think of forming such a conclusion. A far more rational deduction from the premises would be that the presence of alcohol in the system *prevents* the excretory organs from eliminating from the body the *dead* and *poisonous products* which result from the wearing out of the tissues. This conclusion would seem to be far more reasonable, since alcohol itself is a poison which is thrown out by the same organs whose proper function it is to remove the debris of the tissues. These organs cannot perform more than a certain amount of labor. If most of their activity is expended in eliminating alcohol, of course they can perform less of their proper labor, and so the dead products of disorganization will be left to accumulate in the body and produce a deceptive

increase of weight. It is by this means that the drunkard often acquires a bloated appearance. Every one knows that such an accumulation of tissue is not healthy flesh; yet it is of the same character as that which leads some prejudiced scientists to pronounce in favor of alcoholic beverages as a preventive of waste.

Surely, such science must be of the kind referred to by the apostle Paul when he spoke of "science falsely so-called."

3. Alcohol Strengthens the Muscles.

The laborer, the traveler, and the soldier use alcohol under the delusion that it strengthens. When fatigued, the laborer takes a glass of grog and *feels* better, or thinks he does. He imagines himself stronger. His increased strength, however, is wholly a matter of the imagination.

The use of alcohol makes a man *feel* stronger—makes him believe that he can do more work, endure more fatigue and hardship, and withstand a greater degree of cold than he could do without it; but when an actual trial is made, it soon becomes apparent that the ability is lacking. Feeling and doing are two wholly different things; and here is where alcohol is so deceptive. It is a narcotic, and paralyzes the nerves so that they lose their normal sensibility. The weary man takes a glass of brandy, and continues his toil—not because he has been strengthened, not because his vital forces have been reinforced, but because he

no longer *knows* that he is tired. Weariness is an appeal for rest on the part of the tissues. They have become worn and broken by action, and they require time to repair themselves. Alcohol has the same effect upon the nerves which control the building up of the body that chloroform has upon the nerves of general sensibility, and it allays the sense of weariness in the same way that chloroform allays pain during a surgical operation, by paralysis. A person whose hand has been rendered insensible to pain by intense cold may place his fingers in the fire without suffering at the time, but he is not thereby prevented from being burned, any more than though his sensibility was unimpaired; and the effects of the destructive action of heat will ultimately become painfully apparent.

When a man has labored until his tissues are so broken down that they demand time for reconstruction, alcohol will so paralyze his sensibilities that he may continue laboring for a time, but he does so at a terrible cost; for he is all the time continuing the process of breaking down his tissues beyond the point at which nature warned him to desist. Not infrequently this reckless expenditure is continued so long that the life forces become so completely exhausted that the individual becomes a victim of delirium tremens, or perhaps dies from exhaustion.

Numerous experiments have shown that alcohol decreases muscular strength. Says Dr. Brin-

ton, "The smallest quantity takes somewhat from the strength of the muscles." Says Dr. Edmunds, of London, "A stimulant is that which gets strength out of a man."

Said Prof. Willard Parker, M. D., of New York, "It has been proved that when taken into the system it diminishes the temperature, lessens the strength, and by about *forty per cent.* shortens human life."

4. Alcohol Warms the Body.

The sensation of warmth produced by taking a glass of wine or brandy is delusive. The circulation is unbalanced, and for a few moments there is a seeming increase of heat; but the thermometer shows that the temperature is lessened. Says Dr. Parkes, the eminent English sanitarian, "All observers condemn the use of spirits, and even of wine or beer, as a preventive against cold." The names of Dr. King, Dr. Kane, Captain Kennedy, and Dr. Hayes, may be cited as holding to this opinion. In the last expedition in search of Sir John Franklin, the whole crew were teetotalers.

Prof. Janeway, M. D., professor of materia medica in Bellvue Medical College, stated in a lecture before his class that alcohol does not assist those who use it to endure cold. In proof of the assertion, he related the following incident, which was given to him by the first gentleman mentioned in the account:—

A gentleman was appointed by the government to go on a survey in the Eastern States in the depth of a severe winter. He chose for his assistants men who were total abstainers. At the same time, another party set out upon the same business, the members of which were addicted to the use of whisky. Only one of the first party gave out, while nearly every one of the whisky-drinkers succumbed to the influence of cold.

"Plenty of food, and sound digestion, are the best sources of heat." "I am quite satisfied that spirituous liquors, though they give a temporary stimulus, diminish the power of resisting cold."—
SIR JOHN RICHARDSON.

"When a continuance of exertion or endurance is called for, spirit does harm; for you are colder or more fatigued a quarter of an hour after [taking] it than you would have been without it."—
DR. HOOKER, physician of the Arctic expedition under Sir John Ross.

Prof. Miller states that the Russian military authorities "interdict its use absolutely in the army, *when troops are about to move under extreme cold*; part of the duty of the corporals being to smell carefully the breath of each man on the morning parade, and to turn back from the march those who have indulged in spirits, it having been found that such men are peculiarly subject to be frost-bitten and otherwise injured."

"The Hudson's Bay Company have for many years entirely excluded spirits from the fur coun-

tries to the north, over which they have exclusive control, 'to the great improvement,' as Sir John Richardson states, 'of the health and morals of their Canadian servants, and of the Indian tribes.'"—DR. CARPENTER.

5. Alcohol Protects against Excessive Heat.

The advocates of drinking, like the man in the fable, "blow both hot and cold," in their arguments. They love the beverage, and so it must be useful in some way. Dr. Parkes says on this point, "Not only is heat less well borne, but insolation (sunstroke) is predisposed to." "The common notion that some form of alcoholic beverage is necessary in tropical climates is, I firmly believe, a mischievous delusion." His statements are supported by all the best authorities on tropical diseases—Dr. Carpenter and others.

Said Stanley, the African traveler, "A drunkard cannot live in Africa."

Said Prof. John Bell, M. D., an eminent medical author, "They who drink nothing but water have been found to be more enduring of fatigue and great labor, and of hardships and exposures in every extreme of climate and season, than they who use alcoholic beverages. The comparisons have been made in almost every conceivable manner (seldom, it is true, designedly), and with the result just announced. Men who have to carry on laborious occupations at a high temperature,

as in iron-foundries, gas-works, sugar-houses, etc., find that the use of alcoholic liquors, while they are so employed, is decidedly prejudicial to them. Of twelve workmen—smiths in the dock-yard at Portsmouth, England—who tried the experiment for a week, six drank nothing but water, the other six took the usual allowance of beer. After the first day, the water-drinkers complained less of fatigue than the others, and after each successive day, the advantage was on the side of the abstainers, until the conclusion of the week, when the water-drinkers declared that they never felt so fresh in their lives as they had done during this period.”

According to Sir James McGregor, quoted by Dr. Bell, the Anglo-Indian army was never so healthy as when in Upper Egypt, where no ardent spirits were supplied to the troops on account of the difficulties of transportation. The soldiers were often exercised in the sun, the heat of which was so great that the thermometer indicated 118° F. in the shade.

It has been observed that among English soldiers in India those who are strict teetotalers endure long marches under exposure to a tropical sun much better than those addicted to the use of liquor.

6. Alcohol Stimulates.

So, then, do opium, strychnia, and prussic acid stimulate. What is a stimulant? “Stimulant”

is only another name for poison. Stimulation means poisoning. When alcohol, or any other one of a hundred poisons which might be mentioned, is taken into the body, every vital organ sets to work to get it out. The liver filters it out in the bile; the lungs pour out volumes of it in the form of a vapor, making a drunkard's breath smell like a distillery; the skin pours it out as sweat; the kidneys do their part in expelling the vile drug; and all the time the heart pumps away with violence to hasten the departure of the intruder. This great commotion in the vital economy is called "stimulation."

These are the first effects of alcohol, or the effects of small doses—such effects as the moderate drinker feels. The later effects, and those which result from larger doses, are depressing. The excitement is followed by a corresponding degree of depression, or partial paralysis, since the drug supplies no force in return for that which it expends. Many of the ablest physicians pronounce alcohol a narcotic.

If alcohol is a stimulant, that fact is one of the best arguments against its use. Says Sir B. Brodie, "Stimulants do not create nerve power."

7. Alcoholic Drinks Protect the System against Disease.

One finds an excuse for the use of liquor in small or great quantities in the theory that it will fortify his system against the ravages of small-pox or cholera. Another takes liberal

loses of brandy to "keep off the chills." Another keeps his system saturated with alcohol so that he will not take cold. Any one of these diseases, or almost any other, would be infinitely less harmful than alcohol itself, even if the opinion were true, that alcohol is a preventive; but alcohol is not a preventive of disease, according to the experience of the most reliable observers. Dr. Parkes, Sir John Hall, Inspector General of the English army, Dr. Carpenter, Dr. Mann, Henry Martin, and others of equal eminence, all concur in this opinion.

Indeed, the most indubitable evidence can be cited to prove that alcohol is directly the cause of a vast amount of disease, instead of being, as many suppose, a preventive. If alcohol were a preventive of disease, then those who use it ought to be the most healthful; but we find the contrary to be the case. The liquor drinker, instead of living longer than the teetotaler, as he ought to do if this theory were true, lives, on an average, after reaching adult age, only one-fifth as long as the abstainer, as shown by life-insurance statistics.

We have already enumerated more than forty distinct diseases which are the direct result of the use of alcoholic drinks in one form or another.

8. Alcohol Aids Digestion.

The moderate drinker takes his morning dram to fortify his stomach for the reception of his

breakfast. Immediately after breakfast, he must have another glass to assist digestion. But how does alcohol assist digestion? Not by dissolving the food, for its effect is to harden tissues. It does not render the gastric juice more efficient, for it destroys it and causes its active element, pepsin, to be deposited as a white powder. In dogs to which alcohol was given with food, it was found that the process of digestion had not begun, twelve hours after eating. The stomach is obliged to remove all the alcohol before digestion can begin. This, then, is a monstrous fallacy.

9. Alcohol Is Made from Grain.

“But,” says one, “alcohol is made from grain, and if it is so very bad, why should not the grain be injurious also? There is a little poison in everything, any way.”

Alcohol is made *from* grain, but it is not found *in* it. Smoke is made from wood, yet there is no smoke *in* wood; it is made by the destruction of the latter. Alcohol is made by the destruction of fruits and grains.

It is an absurd popular notion that there is, necessarily, poison in everything. In these days of wholesale adulteration it is often difficult to obtain food unmixed with poisonous products; but nature does not serve us so badly. Poison is not essential to life.

10. Whisky Does not Hurt me.

The opium smoker, the absinthe taker, the arsenic eater, all use the same argument, yet each falls a victim to his vice. You do not know what alcohol is doing for you. "Wine is a mocker [deceiver]." You cannot see its depredations. Your blunted sensibilities cannot feel its ravages. Your friends see it. Your wife notes it and mourns over it. You can yourself see it in others. Are your tissues different from those of every other man? Are they made of iron that they cannot be destroyed? Is the alcohol you drink different from all other alcohol? No; your good sense tells you, No. Then reform before it is too late.

11. Pure Liquor Is not Bad.

"If we only had such pure liquor as they used to make, it would not be so very bad," says one. "Only take a little of my wine; I made it myself, and it cannot hurt any one," says the good housewife.

These are two mischievous errors. Alcohol is the worst poison found in liquor. No drug added by adulteration is so bad as the fiery liquid itself. Pure liquor is simply pure poison. Alcohol is always the same, and its effects are always identical, whether it is found in the whisky barrel, or the cider barrel; in rum, brandy, lager beer, home-made wine, or "temperance bitters."

Alcohol is the horrid fiend we are fighting, no matter under what guise he comes.

12. Moderate Drinking not Harmful.

Every man, even the drunkard himself, admits that liquor in excess is injurious ; but a large and very respectable class claim that it is an evil only in excess, and is a harmless luxury, if nothing more, in moderate quantities. This, too, is an error which has proved fatal to thousands. A small dram soon grows to be a large one ; claret is exchanged for grog or toddy ; and so, by degrees, the moderate drinker becomes a drunkard, the first "small drop" engendering a love for succeeding larger doses.

It is not necessary that a man should be dead drunk to be intoxicated. Intoxication is derived from a Latin word meaning poison, and means, literally, a condition of poisoning. Alcohol is a poison. If a man takes it into his system, he is poisoned, or intoxicated, in proportion to the amount taken.

Moderate drinking produces a disease well-known to physicians as *chronic alcoholism*. It is especially dangerous to the old, as it is one of the most powerful predisposing and exciting causes of apoplexy, as well as of numerous other diseases.

13. Doctors Recommend Wine and Brandy.

It is a lamentable fact that a large class of physicians use alcohol in their practice in a most

reckless manner. The result is seen in hundreds of drunken sots who haunt saloons and grogeries. That this use of alcohol is wholly unnecessary is shown in a succeeding section of this work.

14. Scientific Men Recommend the Use of Alcohol.

This, too, is a deplorable fact; for it is a sad spectacle when science stoops to cater to the demands of morbid appetites and vices. It is a significant fact that those scientific authorities who recommend the use of alcohol are themselves addicted to its use. It is not an unjust inference that their judgment, in this case, is biased by their appetite. But there are a great many of the most eminent scientists who are the strongest advocates of total abstinence. Among them are Dr. W. B. Carpenter, Dr. Parkes, Dr. Richardson, Dr. Parker, and Sir John Hall.

"If alcohol were unknown, half the sin and a large part of the poverty and unhappiness would disappear from the world."—DR. PARKES. *Practical Hygiene*, p. 242.

"There is, of course, no doubt that wine is unnecessary as an article of diet."—*Ib.* p. 241.

15. The Bible Sanctions the Use of Wine, and Good Men Use It.

The Bible has been quoted to sustain polygamy, slavery, and other evil institutions, as well as intemperance. Rightly understood, it sup-

ports none of these practices. In a subsequent portion of this work we have considered this point at greater length.

Good men, even ministers, do many evil things. All men are human. One man's transgression is no apology for another's sin. This argument is only a subterfuge. It has no weight.

16. All Nations Use Stimulants.

Some will argue from the fact that the use of liquor of some kind is almost universal that the appetite for it is a natural one. Admitting that inheritance may have made it such, the argument is still worthless; for what nation is there among whom lying, stealing, and other crimes and vices do not also exist? If intemperance is a universal evil, the fact should be most deeply deplored, instead of being made an excuse for perpetuating the vice.

But intemperance is not universal. Until taught the use of alcohol by white men, the North American Indians were wholly unacquainted with the fiery beverage which they have appropriately named "fire water." And the introduction of liquor among these savages has done more toward their extermination than any other cause. Many other barbarous tribes are still in happy ignorance of this enticing poison.

Again, the appetite for fermented drinks is not a natural one. Offer an infant brandy; it is repulsed at once, as it should be. No beast natu-

rally loves alcohol, though there are several animals which, like man, may be taught to love liquor and demand it as imperiously as any old toper. The hog is an animal of this kind. The resemblance of man to this animal, in this respect, is not flattering, at least.

Dr. Floyer, a writer of the early portion of last century, relates the case of a brewer's dog which learned to like beer and ale, and formed the habit of licking ale and yeast from the brewer's trough. After a few years he began to suffer greatly from gout, his feet and limbs swelling prodigiously. The drunken dog finally died, as thousands of other drunkards have, of dropsy.

Even though an artificial appetite has in some cases been created, this fact does not change the relation of alcohol to the system in the least. Alcohol is a poison still; and the system will treat it as such, in spite of an inherited or an acquired appetite for it.

17. The Use and Sale of Alcoholic Liquors Is a Source of Great Revenue to the Government.

Says the liquor dealer, The manufacture and sale of alcoholic drinks gives employment to more than 500,000 men. It furnishes a market for more than 40,000,000 bushels of grain each year, and pays to the government an annual tax of \$60,000,000, or about two-fifths of the whole revenue of the country.

Such arguments are actually urged by the

drain-sellers and their infatuated customers. What a damage to the government would be the loss of \$60,000,000 of revenue! and what a pity that 500,000 poor laborers should be thrown out of employment! Ah! yes; and what a pity that 40,000,000 bushels of grain, equivalent to 600,000,000 four-pound loaves of bread, should be wasted—worse than wasted, manufactured into poison. The same liquor which brings to the government a revenue of \$60,000,000, makes 800,000 paupers, who require for their maintenance \$100,000,000. There is very little profit in this, surely. The cost of crime resulting from drink is still greater. The expense of caring for 30,000 idiots and lunatics must also be charged to alcohol. Where, then, are the profits? We have said nothing of the loss resulting from the unproductive labor of those employed by the liquor business, or from the idleness, disease, and death occasioned by drink, which aggregate an enormous sum.

18. The Moderate Use of Wine Is Necessary to Maintain Nervous Activity in Old Age.

Many, even of those who profess to be instructors of the people in the laws of health, advocate the use of wine in old age, on the ground that age renders the system somewhat sluggish in its activities, and hence a little stimulus is needed to maintain its functions, and especially nervous activity.

A consideration of this argument will show that the use of alcohol is not only unnecessary in old age, but absolutely hazardous. Why are the bodily functions less active in old age than in youth? Why is the mind less brilliant? Because the organs of the body have become worn and disabled by long usage and imperfect repair. The tissues are not kept intact by assimilation. The reason why they are less active, then, is that they are less qualified to act. They are incapable of that vigorous action which they sustained in youth and middle age.

This decreased activity is an admirable provision of nature for the prolongation of life to the utmost limit. The waste of tissue depends upon its activity; the more action, the more waste and wear, the sooner worn out. Using alcohol produces an increased activity, but does not increase the capability of the system to sustain action. In other words, it tears down tissue, but does not build it up. It interferes with the repair of tissues. The increased vigor seemingly imparted by alcohol, therefore, is *dangerous*, rather than desirable. If alcohol enables a man to live faster, it shortens his existence by so doing.

Again, alcohol, even in moderate quantities, produces a peculiar degeneration of the walls of the blood vessels, by which they become weakened, the muscular tissue composing the small vessels being replaced by particles of fat or carbonate of lime. This kind of degeneration is also a

frequent incident of old age, even in those who are not spirit drinkers, and is especially liable to occur in the small arteries of the brain. The use of alcohol not only facilitates this morbid process, but adds to the danger which is always present with it under the most favorable circumstances. When the arteries are thus weakened, a little extra supply of blood in the brain, a "rush of blood to the head," will often occasion rupture of some one of them, and apoplexy, with paralysis or immediate death, is the result. Alcohol, even in very small quantity, produces congestion of the brain, and thus renders an aged person doubly liable to death from apoplexy.

Are we not justified, then, in the position that alcohol is not only less desirable for the old than for the young, but is far more dangerous ?

19. Alcohol Drives away Dull Care.

It will not be disputed that alcohol will dissipate cares, and pains, and sorrows. It makes a poor, homeless, friendless, poverty-stricken wretch feel as rich as a king. It makes the doomed murderer forget that he is soon to swing into eternity from the gallows. It makes the fallen outcast from society forget her shame. In short, it makes the user momentarily oblivious to all that is unpleasant in life.

But the release thus obtained is only for a moment, and it is inevitably succeeded by a return of the same old burden, rendered more gall-

ing and onerous by the stings of conscience and the goadings of remorse.

When a man's brain is so benumbed that he does not know his real condition, and loses sight of the realities of life, he is likewise incapable of appreciating any of those higher experiences and sentiments which constitute the highest enjoyments, the true realities of life. Only gross and sensual pleasures can be experienced when the mind is befogged by alcohol.

20. Alcohol Increases Mental Power.

Thousands of editors, lawyers, students, authors, and even clergymen, keep beside their midnight lamps a bottle of wine or brandy, and consider one as indispensable as the other. They imagine that with the frequent drams they quaff from that green bottle, they imbibe an increase of mental vigor. Thousands of lecturers, orators, and ministers, sip a glass of sparkling poison just before they step upon the platform. The first imagines that alcohol is necessary to enliven his energies and sharpen his memory. The second relies upon alcohol to burnish his eloquence. The third depends upon the poisonous beverage to quicken his pious zeal, intensify his fervor, and lend him inspiration for the duties of his office.

We might justly dwell upon the absurdity of such practices, and well question the efficiency of a gospel shrouded with the fumes of alcohol; but we will only quote the words of Dr. James Ed-

munds, of London, Eng. He says, in speaking of the narcotic influence of alcohol:—

“That is the effect when a minister, who cannot preach without a glass of wine, has a glass in him. He finds his tongue will run on a little faster than his brains would be able to drive it if he had not got the alcohol in him. I submit to you broadly that if you take a man with a single glass of wine or spirits in him—if you test that man’s mental accuracy and real debating power, you will find that the man who has spirit in him won’t do it as well as the man who does not use it.”

21. Alcohol Is a Good Medicine; and if it Will Make a Man Well when Sick, Will it not Keep him Well?

Alcohol is not a good medicine, as elsewhere shown. It is a poison, always, under all circumstances. But if it were a medicine, this would certainly be reason enough for discarding it; for a medicine is supposed to be a substance peculiarly adapted to meet the demands of the system when in a state of disease. Almost any one of those substances popularly known as medicines will make a man sick if used habitually.

Dr. Gully pertinently remarks, “Healthy men, and men with chronic disease, do not require medicinal means every day after dinner. Yet there are men silly enough not only to take a nauseous pill of drugs *before* dinner, but this more

pleasant but equally deleterious draught of physic [wine] after dinner. Strange infatuation !”

22. I Cannot Reform.

One more oft-repeated argument requires notice. It is the argument which the confirmed, besotted drunkard uses. He admits all we claim concerning the sin of drunkenness and the direful effects of the vice, for he sees himself a wreck in consequence of its use. He deplores his wretchedness, and curses the man who first placed the burning liquid to his lips. He contrasts what he is with what he might have been, and weeps over his condition ; but if you speak to him of reform, he wails, “ Alas ! it’s now too late. I can’t reform.”

“ Never too late to mend ” is as good a motto for the drunkard as for any other person. It is true his will is nearly paralyzed, his conscience blunted, and his faculties obscured. It is true that his life is nearly wasted, and that, at best, he has but a few more days to live ; and still, reform is possible, and he may yet escape the stigma of a drunkard’s grave. Let him summon to his aid all his few remaining energies. Let him call to his rescue every spark of manhood still glowing in his dilapidated soul ; and let him make one desperate strike for liberty from the slavery of his loathsome vice.

CAUSES AND CURE OF INTEMPERANCE.

CAUSES OF DRUNKENNESS.

1. The Drunkard's Legacy.

THE most confirmed and irreclaimable drunkards are those who have inherited the appetite from drinking ancestors. There are many such. They are really less responsible for their condition than those whose vices have entailed it upon them. Many instances are known in which the tendency to drink extended to the fifth generation from a drinking ancestor.

Probably this is the most active cause of the great and unabating increase of intemperance. Drunkards' sons become drunkards through inheritance, and transmit the propensity to their children, stamping it still more deeply upon their depraved organizations.

2. Alcohol in the Kitchen.

The use of alcohol in cookery has done not a little to cultivate a love for the burning beverage. Wine and brandy sauces, and other preparations containing alcohol, early excite and form a love for alcoholic drink in children whose nat-

ural tastes would discard it at once. It is not at all uncommon to find alcohol taken in this form, even by people who consider themselves strict teetotalers.

3. Moderate Drinking.

The moderate use of liquor is the stepping-stone to greater excesses. All drunkards are at first moderate drinkers. Were there no moderate drinkers, there would soon be no drunkards. No man sets out in the drunkard's career with the expectation and determination of becoming an inebriate. It may be justly said that moderate drinkers are fresh recruits for the ranks of intemperance.

4. The Kitchen a Nursery of Drunkenness.

The use of alcohol in cookery has already been referred to as a cause of intemperance. Still another charge of far more universal application must be laid at the door of the cook, though the ignorance of the latter may cancel part of the responsibility. We refer to the general and excessive use of stimulating and irritating condiments in the preparation of food. Pepper, spices, and large quantities of salt and most other condiments, have an unmistakable influence in creating and exciting a love for stimulating foods and drinks, and thus ultimately lead toward intemperance.

5. Tea and Coffee Encourage Drunkenness.

This statement will doubtless startle those who have been taught to believe that there is no evil in "the cup that cheers and not inebriates;" but we are prepared to show that the influence of the use of these poisons (for such they are) directly tends to encourage drinking stronger stimulants, though our present space will not allow us to enter into a discussion of the subject, as we have done elsewhere. (See Health Tract, No. 6, "Tea and Coffee.")

6. The Twin Sister of Drunkenness.

Tobacco-using and drunkenness go hand in hand. Nearly, if not quite, every drunkard chews or smokes. The great majority of drunkards became addicted to the use of tobacco first. Thus they learned to demand a stimulus of some kind. The feverish heat produced by tobacco required quenching, and liquor was resorted to. The white man gave the Indian rum, and the latter gave him tobacco in return. The exchange was a bad bargain for both. Either is bad enough alone; but rum and tobacco together are blasting the human race like a simoon from the heart of hell.

7. Medical Use of Alcohol Causes Drunkenness.

Thousands of men, and women too, have acquired an appetite for alcohol through a doctor's prescription. An unwise physician gave ale,

beer, wine, or brandy as a "tonic," "to improve digestion," "to strengthen the system," "to counteract debility," or for some similar reason. The patient thus acquired a love for the stimulation of alcohol, and soon came to regard it a necessity, and took the duty of prescribing into his own hands. In a few years he became a drunken sot, and died a drunkard's death. * This subject is elsewhere considered at greater length.

8. Sundry Causes of Intemperance.

Ambition to excel on some particular occasion, or a desire to compel nature to forego rest beyond reasonable limits, has led many to take "an occasional drop," to their final ruin. The "fine exhilaration," the "lively play of the imagination," which accompanies slight stimulation, has led captive thousands of poets, authors, orators, statesmen, and even clergymen.

THE CURE OF INTEMPERANCE.

1. Prohibition Insufficient.

We are heartily in favor of prohibition. Liquor-selling is as much a crime as theft. But we have no faith that prohibition alone will ever exterminate the vice of intemperance. Thieves will exist, in spite of laws against theft, so long as men are covetous and unscrupulous. So men will find some means to obtain liquor so long as they have

an appetite for the drug. Alcohol will be furnished so long as there is a demand for it.

But no true friend of temperance will refuse to co-operate with those who are earnestly seeking to control this great evil by prohibition because this measure does not promise to be wholly successful. It is certainly as great a crime to manufacture alcohol to sell to men as a wholesome beverage as to make counterfeit bills. It is as great an offense to rob a man of his health and happiness by selling him rum as to steal his property. Why not enact laws against such offenses? It would be as reasonable to contend that there should be no laws against theft because such laws will not abolish stealing, as to urge that the manufacture and sale of liquor should not be prohibited by law because such a law would not wholly cure intemperance. Moral suasion alone will effect a radical cure of thieving, or of drinking; but let us have the laws, nevertheless. Prohibition will do something. If the supply is cut off, the demand may diminish somewhat.

2. Moderate Drinking a Trick of the Devil.

Intemperance is one of Satan's surest means of leading men to perdition; and moderate drinking is one of his most alluring snares. Those who argue that the moderate use of wine would cure intemperance, have only to look to wine-producing countries for a refutation of their theory.

Drunkenness is as common in Switzerland and California as in New York, though wine in those countries is nearly as plenty as water. Wine, as well as whisky, contains alcohol, and alcohol is poison in all doses. Intoxication means poisoning. The moderate drinker is poisoned a little, the gutter drunkard is fully intoxicated. The difference between the two is only one of degree.

3. The Pledge not a Cure.

When the temperance reformation was first instituted, it was considered sufficient evidence of a man's reformation if he simply placed his name to a form of words which pledged him to abstain from the use of intoxicating drinks as a beverage. When this was accomplished, it was considered that a great victory had been won. No restriction was placed upon the use of alcohol as a medicine, and thus the pledge amounted to little more than a nullity. It has been estimated by experienced temperance workers that at least three-fourths of those drunkards who have been induced to sign the pledge have returned to the vice again, some within a few days, others after longer periods of sobriety. It is next to an impossibility to reform a confirmed inebriate. A drunken woman is even more difficult of reformation than a male drunkard; and some have even declared the restoration of a woman addicted to drink to a life of sobriety a human impossibility.

Temperance societies may have accomplished some good, but the real benefit arising from them cannot be estimated very highly. Temperance lecturers really accomplish very little good in most cases. As a general rule they aim more toward securing their own popularity by amusing the audience than toward the reformation of the inebriate. The very class of individuals who ought to be benefited by a portrayal of the evils of rum are debarred from hearing the lecturer by an admission fee, or by the contemptuous looks of those who attend for the purpose of being entertained.

4. Use of Substitutes a Fatal Error.

It is of no use to search for substitutes for alcohol, for they will prove either wholly inert, or quite as bad. Tobacco, opium, and tea and coffee are the Turk's substitutes for alcohol, which the Koran denies him. No one will claim that his condition is better for the exchange. Artificial stimulation is the great sin of intemperance, and the cause of its evil results. All substitutes are likewise stimulants; hence, they are of no value as remedies.

5. The Only True Cure.

Intemperance can only be cured by destroying the demand for liquor. The drunkard must be convinced of the error of his ways and led to reform. We must stop making drunkards by pam-

pering the appetite for stimulating food, and exciting the palate with irritating condiments. The battle must be waged against tobacco and opium, as well as alcohol. All modes and degrees of stimulation must receive equal censure.

6. Vegetarianism a Cure for the Appetite for Alcohol.

Mr. Napier, of England, recently read before a learned society an account of the cure of a large number of cases of drunkenness by the adoption of a vegetarian diet. The great chemist, Prof. Liebig, observed, more than twenty years ago, that people who used only vegetable food did not take wine. Becoming acquainted with this fact, Mr. Napier made a practical application of it, with the result already stated. The following is a brief report of a few of his cases:—

“An analytical chemist, aged thirty-two, who was given to intemperance, on having his attention called to Liebig’s statement, was induced to adopt a vegetarian diet, and before six weeks he was a total abstainer. A lady of independent means, a clergyman, a girl of nineteen, a man and his wife and sister (all over forty years of age), a bedridden gentleman (cured in thirty-six days), a captain in the merchant service, a half-pay officer, a clergyman and his wife, were all cured by a diet mainly farinaceous [vegetable]. Two sisters, members of a family noted for intemperance, were cured in about a year. A clerk who had

lost several situations by intemperance was cured by vegetarianism and taken back at an increased salary. A governess aged forty, two military pensioners, a man of sixty, and three old sailors were permanently cured in a few months."

Beans, peas, rice, and highly glutinous bread (graham bread), were observed to be of special value as articles of diet. This testimony is a powerful one in support of the position that the use of animal food is in some degree favorable to intemperance, and may perhaps be a remote cause of that vice in many cases.

7. How Shall the Drunkard Reform?

The great obstacle to the reformation of a drunkard is his want of will power. His mind is diseased as well as his body. His will is paralyzed as well as his trembling nerves. He has no power to resist the temptation so long as it is before him; hence, he must not be allowed to see, or smell, or taste the enticing fluid. Immediate total abstinence is the only safe course. It is of little use to attempt to reform by degrees, for a little liquor keeps the appetite alive and clamoring for more. Abandon substitutes of every kind. Rest and sleep as much as possible.

Lastly, the poor drunkard may find his resolutions strengthened by appealing for aid to Him who pities the frailties of his creatures and proffers help "in time of need."

ALCOHOLIC MEDICATION.

THE medical use of alcohol is the strong fortress into which the moderate drinker runs when hard pressed by the advocates of total abstinence. It has always been a sort of Gibraltar for intemperance. The admission of the medicinal use of alcohol as a stimulant, tonic, conservator or generator of vital force, has been the rotten plank in the temperance platform. It has made the defenses of teetotalism, otherwise impregnable, exceedingly vulnerable. Temperance reformers have kept this part of the subject in the background as much as possible; but moderate drinkers have persisted in making it prominent on every possible occasion, often to the great discomfiture of the advocates of total abstinence for the well, but unlimited indulgence for the sick.

It has become evident to those who have given the matter candid thought, that either the common employment of alcohol as a medicine is a stupendous error, or teetotalism is a fanatical delusion. Which of these positions is the true one? It must certainly be that one which best agrees with facts—scientific facts—and reason.

No other drug is employed so largely in medicine as alcohol. Alcohol is not only prescribed in the form of alcoholic drinks, but, in combina-

tion with other drugs, in all tinctures, and many other pharmaceutical preparations. Still greater quantities reach the stomachs of the people through a host of quack remedies, patent medicines, known under various delusive names, as cordials, bitters, tonics, restoratives, etc., etc. But our space is limited, and we must hasten to consider the facts.

Medical Properties of Alcohol.

According to the classical authors on *materia medica*, alcohol is a *nervine*, *stimulant*, *tonic*, *narcotic*, *diaphoretic*, *diuretic*, and *caustic*. Its varied properties are urged as sufficient apology for its so general use, they making it applicable, as supposed, to almost any actual or imaginary case of disease. If alcohol really possesses such a long list of virtues, it must be a very useful drug indeed. But what is a *nervine*? a *tonic*? a *stimulant*? In other words,

What Are Medicinal Properties?

One would think from the language of the books, giving it a strictly literal interpretation, that drugs are endowed with certain peculiar and characteristic properties which enable them to act upon the body in a peculiar manner. For example, a drug which when taken into the stomach is thrown out again is called an *emetic*, and is spoken of as though it acted upon the stomach. Of course, no one now believes such an

absurdity, though the idea may have been held some time in the Dark Ages, and the incorrect expressions then formulated have been handed down to us. But we use them as figures of speech, or tropes, just as we say the sun rises, though we know perfectly well that it does not stir, or that the eye sees, or the hand feels, while well aware that the real seat of sensibility is deep within the skull. The emetic does nothing to the stomach, it does not act, it is only acted upon.

A drug which, when taken into the system, is expelled by the kidneys is called a *diuretic*. Medical writers understand this fact, but for convenience they speak of the drug as acting upon the kidneys. Possibly there are some unthinking persons who really suppose that sweet spirits of nitre or juniper *acts* upon the kidneys; but scientific physicians entertain no such erroneous idea.

A *cathartic* is a drug or poison which is expelled by the intestines. A *diaphoretic* is a drug which occasions an increased activity of the skin, or perspiration, which process is excited for the purpose of expelling the drug.

If we should consider each one of the *properties* of different medicines, we should find that in each case the property (so-called) of a drug is the *manner in which the system acts toward it or upon it*. The words *nervine*, *stimulant*, etc., as

applied to alcohol, are merely terms to indicate how the system behaves toward this drug when it is taken into the body.

A drug which occasions only one kind of action has but one property. A drug which occasions numerous actions or disturbances in the body possesses many properties. Alcohol, when taken into the body, is expelled in a variety of ways, and produces a general disturbance; hence its varied properties. The more general the disturbance which a drug occasions, the more numerous and varied its properties.

In brief, then, the medicinal properties of alcohol, before enumerated, are so many terms for indicating a corresponding number of disturbances or disorders which the drug occasions in the body.

When medical authors say that alcohol *acts* so and so, we must understand them to mean only that the drug *occasions* such an action on the part of the system.

The Physiological Effects of Alcohol.

The term *physiological*, as applied to the effect of alcohol, is really a misnomer. We should prefer to substitute *pathological*, to be strictly scientific, but we will not quarrel about the term, so long as there can be no misunderstanding about what is meant; we employ it because it is in common use. We will present as briefly as possible an account of the effects which follow the application of alcohol to living tissues.

When applied to plants, says Pereira, a noted medical writer, "alcohol acts as a rapid and fatal poison."

Says the same author, "Leeches immersed in spirit die in two or three minutes." Frogs are affected in the same manner, as well as snakes.

We have seen the heart of a turtle contracting vigorously several hours after removal from the body of the reptile. When placed in alcohol, its contractions cease in less than a minute.

Alcohol causes paralysis when applied directly to the trunk of a nerve. It has the same effect when applied to a ganglion. If a pigeon's brain be exposed by removing a portion of its skull, alcohol may be applied directly to the cerebellum. The effect produced is essentially the same as that which follows the removal of the cerebellum by the knife. The poor pigeon plunges and staggers about like a drunken man, and for precisely the same reason.

If a little alcohol is added to a vessel of water containing live minnows, they will speedily die.

Applied to the skin, and retained by some impervious covering to prevent evaporation, alcohol produces irritation and numbness.

Applied to the mucous membrane of the eye or mouth, still greater irritation is occasioned. When taken into the stomach undiluted, it produces intense irritation, inflammation, and ulceration, as proved by Dr. Beaumont's observations upon Alexis St. Martin.

When mingled with the blood, alcohol destroys the blood corpuscles, increases the proportion of fat from 1-500 to 1-7, in some cases, renders the blood less capable of passing readily through the capillaries, and injures the nutrient elements of the plasma of the blood. When a considerable quantity of alcohol is taken, the distinction between venous and arterial blood is almost destroyed, all of the blood assuming a dark hue. It was thus that the English nobility, through habits of dissipation, became distinguished for their blue blood, which was by them considered an evidence of noble origin.

But alcohol does not remain in the blood. It permeates every tissue, and for some curious reason not yet satisfactorily explained, accumulates in nerve tissue more than in any other, unless it be the liver, which would very naturally receive the most, since alcohol when received by the stomach is carried directly to the liver by the portal vein, as soon as absorption occurs.

The effect of alcohol upon the nerves is to lessen sensibility. A man whose nerves are bathed in alcohol has the acuteness of all of his senses somewhat impaired. The degree of impairment depends upon the amount of alcohol present. A large quantity of alcohol destroys sensibility entirely.

We have observed that alcohol is "a rapid and fatal poison to plants," that it kills leeches, frogs, reptiles, and minnows, that it irritates the skin and mucous membrane, destroys the blood, and

paralyzes the nerves. In considering these effects, Prof. Christison, Dr. Pereira, Dr. Taylor, Prof. Orfila, and other authorities of equal note, pronounce it a "*narcotico-acrid* poison."

Says Dr. E. Smith, "It is a poison of the nervous centers."

Says Dr. Edmunds, of England, "There is no great city on our side of the ocean where there are not inquests held upon men who drink a bottle of brandy, and fall down and die just as if you had given them a spoonful of prussic acid. Alcohol is a poison."

Says Dr. Willard Parker, of New York, "By physiological inquiries it has been established that alcohol is a poison."

The Vital Instincts Treat Alcohol as a Poison.

If there should remain the least shadow of a doubt in the mind of any one that alcohol is a poison, it must certainly be removed by considering how the system treats this drug when it is taken into the stomach. At first the mucous membrane becomes congested and throws out a quantity of mucus to protect itself from the alcohol, while the absorbents increase their activity for the purpose of getting the drug out of the stomach as quickly as possible.

Having entered the blood, it is transported at once to the liver, which does its best to extract as much as possible of the poison, though at imminent peril to itself. Very soon the poison-laden blood reaches the heart. This organ also

recognizes the drug as something which has no place in the blood and ought to be removed; and, as it cannot directly effect the removal itself, it pumps a little harder at the circulation in order to hurry the impure blood along to those organs which are especially designed to remove impurities. Hence the increased force and frequency of the pulse.

The first of these organs which the hastening blood reaches, is the lungs, and here the volatile poison is sent out in volumes. Every one knows that a drunkard's breath smells like a beer shop. It is also expelled by the kidneys and the skin, and can be found in the urine and the perspiration. In fact, every excretory organ of the body is engaged in getting rid of this poison.

A food or a friendly substance is not treated in this way. If alcohol is a good thing, it is certainly very much abused by the vital instincts. But the vital instincts are not easily deceived. They recognize food in an entirely different manner. An apple, a potato, milk, or bread, when taken into the body, is utilized. It disappears, and never re-appears as milk, or bread, or apple, or potato. Not so with alcohol. It enters the system alcohol, and leaves it precisely the same as it entered, remaining the same all the way through. Instead of retaining the drug, digesting and assimilating it, the system hurries it out in every possible way. The escaping poison can be detected in the breath for more than twenty-four hours after a small quantity has

been taken. It is long retained in the body, and has been distilled from the brains of drunkards thirty-six hours after its reception into the body.

If after eating apples, potatoes, and sundry other articles, the same articles should be found upon a post-mortem examination, in various portions of the body, apples in the brain, potatoes in the liver, and other articles in other parts, it would be considered as the most indubitable evidence that those articles—apples, potatoes, etc., were not food, since they were not used or changed in the body. If we found these same articles passing out of the body, we should be led to the same conclusion. This is just the experience with alcohol. The conclusion, then, is unavoidable, that it is not food, but poison, as eminent physicians have declared.

Says Dr. Parker, again, of alcohol, "It is not a food, nor should it be used as a common beverage."

All Medicines Are Poisons.

We need not adduce further evidence that alcohol is a poison, for all must admit this point. But, says the advocate of alcoholic medication,

"All medicines are poisons, and the worst poisons are the most powerful remedies."

We willingly grant that "all medicines are poisons." We have good authority to support us in so doing. Said Prof. A. Clark, of the New York College of Physicians and Surgeons, "All our curative agents are poisons," "every dose di-

minishes the patient's vitality." Said Prof. St. John, M. D., "All medicines are poisonous." But how does this help the matter? If medicines are poisons, that fact only makes it so much the worse for the drugs and no better for alcohol.

Does a Change of Name Change Properties?

Here we are met with the argument that alcohol, though a poison to the well, is still a good remedy for the sick. This paradoxical statement is explained by the assumption that the conditions of the system in disease are so different from those present in health that the relations of the vital organs to alcohol are totally changed.

If this assumption is true, then teetotalism is a terrible delusion; for where can a drunkard be found whose system is not in a state of disease? If it is true, then what a curse to the world temperance reformers have been! How many reformed sots have been deprived of the "medicine" which was "curing" them! But is it true? Let us see.

Does a simple change of location from the whisky barrel to the druggist's shelf change its properties? Will a change of name make it wholesome? Will it make a negro white to call him a Caucasian? Certainly not. Alcohol is a poison because it cannot be used in the body for any useful purpose, and because it produces serious disturbances in the vital processes. It is unfriendly to the tissues, and incompatible with them. When a man is sick, are not his tissues

essentially the same in character as when he is well? Are not his muscles still composed of muscular tissue? his nerves of nerve tissue? his bones of osseous tissue? Certainly. Then since the composition of alcohol also remains the same, there can be no change in its relations to the tissues.

Does Alcohol Supply Force?

Many years ago Prof. Liebig announced the theory that alcohol was "respiratory food." By the term respiratory food he meant that it underwent combustion in the body and thus produced heat and developed force. All the moderate drinkers and toppers rejoiced at this supposed discovery, and consoled themselves with the idea that taking a whisky punch was only a pleasant way of eating; and that a man when "gloriously drunk," was merely developing a tremendous amount of force. But scientists ascertained, after a time, that Prof. Liebig, to use the language of Prof. Davy, F. R. S., "adduced no physiological evidence in support of his assertion." Prof. Liebig observed that his neighbors and most of his countrymen loved beer, wine, and brandy; he loved the beverages himself. He observed also that nearly every nation employed some kind of alcoholic drink. The very natural conclusion in his mind was, alcohol is used in the body for some good purpose; and his theory was merely an attempt to explain such a use.

If Liebig's theory were true, then alcohol

would disappear in the body, and only its ashes the products of its combustion, would appear. Unfortunately for the theory, MM. Lallemand, Perrin, and Duroy, three French chemists, by careful experiments proved that, when taken into the body, alcohol *passed out again unchanged*. Hence it was not burned; and hence it did not produce either heat or force. Dr. Edward Smith, F. R. S., repeated their experiments and confirmed their results. The fact that alcohol is unchanged in the body was still further confirmed by the observation that none of the products of the combustion of alcohol, its ashes, were to be found in the blood or the excretions.

The inevitable conclusion from these experiments is that alcohol does not contribute to the production of either heat or force.

Says Dr. E. Smith, M. D., F. R. S., "Its direct action is to lessen nervous force."

"Is 'vital force' augmented by it, or not? All the facts seem to answer in the negative."—*British Medical Journal*.

Says Dr. T. K. Chambers, "Alcohol is primarily and essentially a lessener of the power of the nervous system."

"As their general action is quickly to reduce animal heat, I cannot see how they can supply animal force. I see clearly how they reduce animal power, and can show a reason for using them to stop physical pain; but that they give strength, that they supply material for the construction of fine tissue, or throw force into tissues

supplied by other material, *must be an error as solemn as it is widespread.*" "To resort for force to alcohol is to my mind equivalent to the act of searching for the sun in subterranean gloom until all is night."—DR. W. B. RICHARDSON.

Is Alcohol Useful as a Stimulant?

If by a stimulant we are to understand something which imparts force to the body when weakened by disease, then it is evident that alcohol can be of no service in this direction; for, as already shown, it is incapable of supplying force, undergoing no change in the body. All force arises from changes in matter. The forces manifested by the living system are the result of vital changes occurring in its tissues.

If by a stimulant is meant something which *excites* nervous action, which calls out the manifestation of force, then alcohol is certainly a stimulant. And it is in this sense only that it is a stimulant. The lash is a stimulant to a tired horse. It does not increase his force, or make him any less tired. It only compels him to use a little more of his already depleted strength. A goad, a spur, a red-hot iron, would have the same effect. So with alcohol. It arouses the vital instincts by its presence in contact with some of the tissues, and, in obedience to the law of self-preservation, the vital organs are excited to increased action for the purpose of expelling the poison. This increased activity is what is called stimula-

tion. Can it benefit a person already weak with overlabor? Says Dr. Edmunds, "A stimulant is that which gets strength out of a man." Such a process could not be very beneficial to a person already debilitated.

But a weary man *feels* better after taking wine; why is that the case? Alcohol diminishes sensibility, as chloroform does. It is a narcotic. The weary man feels better after taking wine because he does not know that he is weary, that his tissues need repair. If he continues to labor, he continues to wear out his tissues, and increases the necessity for rest, even though he may not know it. When the narcotizing influence of the alcohol is removed, he will be made painfully conscious of the fact by a degree of prostration far greater than he would have suffered if he had taken no alcohol.

So with the sick. If a man is debilitated by disease, by a long-continued fever, for example, his system is weary with the task of expelling impurities from the body. Now if alcohol is administered, it is expelled as the other impurities have been. It renders the exhausted organs no aid; it imparts no force; it simply imposes an additional task. Such aid is surely not desirable. Who would think of relieving an overburdened horse by adding another burden to his load? No sensible man, certainly. If fever patients recover after taking great quantities of wine and brandy, it is *in spite* of the alcohol, and not by the aid of it; for it has been proved in hundreds of instances

that fever patients do far better without brandy than with it.

Twenty years ago, when a man had fever he was puked, purged, bled, and salivated, under the notion that he had too much vitality—too much life—some of which must be got out of him. The plan of abstracting vitality was so successful that thousands of fever patients were killed who might have lived half a century if they had been so fortunate as to have had only an old woman for a doctor, or a harmless homeopathist.

In later times there has been a most remarkable revolution in the treatment of fevers. Calomel, emetics, purgatives, and the lancet are no longer employed in treating fevers. Instead of depleting their patients, or robbing them of their vitality by the barbarous methods of olden times, “regular” physicians have adopted the theory that in fever the patient has too little vitality, and so they attempt to increase his vital force by potations of brandy, wine, and other alcoholic liquors.

Of course, this practice is founded upon the theory that alcohol supplies force ; but we have already proved that alcohol does not supply force to the body, but that it exhausts, abstracts, and paralyzes. This, then, cannot be the proper agent to employ when an addition of force is required.

Says Dr. James Edmunds, of England, “I believe, in cases of sickness, the last thing you want

is to disguise the symptoms, to merely fool the patient, that if alcohol were a stimulant, that is not the sort of thing you would want to give to a man when exhausted from fever. If your patient is exhausted by any serious disease, surely it would be the more rational thing to let him rest quietly, to save his strength, and in every possible way to take care to give him such food as will be easily absorbed through the digestive apparatus, and keep the ebbing life in the man."

If brandy, or alcohol in any form, is ever admissible, it is only when its poisonous effects as an irritant may be desirable, just as a dash of cold water, the application of a hot poker to the spine, or of ammonia to the nostrils, may each under some possible circumstances be serviceable in arousing the vital energies from a sudden collapse, and thus preventing death.

Alcohol Prevents Waste.

So said Prof. Liebig, who supposed that alcohol might serve as a substitute for the tissues in maintaining the combustion necessary to produce heat. But Prof. Liebig was mistaken. Dr. Smith, of England, proved that alcoholic drinks increase waste. It is useless, then, to give alcohol to the sick for the purpose of preventing the wasting of the body, for it will only accelerate the undesirable process.

Will Alcohol Prevent Consumption?

The notion has lately become prevalent that alcohol will, in some mysterious manner, check the ravages of that dread disease, consumption. It might almost be said that in our large cities, in the practice of regular physicians, few consumptives die sober, so fashionable has this remedy become.

The evidences upon which the utility of the drug in this disease is based are quite too inconclusive to amount to anything like demonstration. In those cases in which recovery has taken place under the use of alcohol, the improvement can be attributed to other far more probable causes than alcohol, as improvement in sanitary or hygienic surroundings or habits.

But the most conclusive evidence against the curative virtues of alcohol in this disease is found in the fact pointed out by Dr. B. W. Richardson, of London, that *alcohol is itself a CAUSE of consumption*. There is no evidence that spirit drinkers are as a class less subject to consumption than abstainers, while it is certain that their mortality is much greater; and one form of disease of the lungs pointed out by Dr. Richardson is found only in those who are addicted to the use of liquor.

Medicinal Use of Alcohol Leads to Drunkenness.

Thousands of victims of intemperance have acquired their appetite for the fatal drug from a physician's prescription. The doctor prescribed it as a tonic. The patient continued to feel the need of a tonic, and so he continued taking his dram as a medicine, a tonic, until he finally found, when too late, that he had become a confirmed inebriate.

Hundreds of reformed drunkards who have been induced to sign the pledge, and who had kept their resolution for years, have fallen back into the gutter again through the careless administration of alcohol by the family physician, and have thus been hopelessly lost to themselves and to society. We might present the touching details of many such cases; but all have been familiar with instances of the kind, and we will not present them here.

In addition to the alcohol prescribed by regular physicians, there is a still greater quantity sold and used under the name of bitters, which always consist of a filthy mixture of poisonous drugs with poor whisky. Not one of them is free from alcohol. This statement is true, notwithstanding the false asseverations of the manufacturers to the contrary. Even "temperance bitters" are no better than the rest. Some of these "bitters" contain more alcohol than the strongest

liquors. By these infernal compounds, thousands of unsuspecting human beings have been lured down to death and ruin. The popular theory that alcohol is a good medicine, helps to inspire confidence in them, and so becomes in a measure responsible for the results.

The Medical Use of Alcohol an Ally of Intemperance.

The doctor gives a man alcohol because he is sick or weak. The moderate drinker takes it for the same reason. The drunkard prescribes his own "poison" because he feels uncomfortable, sick. The moderate drinker takes a glass of wine to give a "lively play of the imagination." When its influence is gone, his intellect is dull, his imagination clouded. He takes another glass to "cure" the difficulty, not considering that the remedy is the very thing that is making him ill. The drunkard wakes up after a night's debauch with an aching head, enervated muscles, and trembling nerves. He takes a glass of rum to cure his bad feelings, and at once feels better. Is not rum a good medicine for him? He thinks it is, and he has the doctors on his side, for the principle is the same whether the patient is suffering from fever debility or whisky debility; whisky cures in each case, and in the same way. Why has not the drunkard as good an excuse for curing his weakness and bad feelings by alcohol as any other person?

Alcohol in Delirium Tremens.

Alcohol is the acknowledged cause of delirium tremens, and yet it has been long considered an essential remedy in the treatment of the very disease it had produced. While this practice would seem to be most ludicrously absurd, it has, nevertheless, been wholly consistent with the theory that alcohol supplies nervous force; for what condition can be found in which the evidences of loss of nerve power and tone are more distinct than in this disease. Practically, however, the use of alcohol in this disease has been a most convincing demonstration of the fact that alcohol does not supply nerve force, for a great proportion of the patients treated with it died.

The most observing physicians have already abandoned the use of alcohol in delirium tremens, as we hope they will soon do in many other diseases. Here are a few testimonies:—

“I have come to the conclusion that the use of spirits in the case of delirium tremens does nothing but injure the patient, and probably hastens his death. I now, without the slightest hesitation, in every case should immediately stop the spirit, and I find that very few cases of delirium tremens that I have are fatal.”—DR. JAMES EDMUNDS.

“If you follow the old treatment, you will lose half your cases. If you follow the treatment

I give you, you will save nearly all. In the hospitals of Edinburg, the expectant treatment is found to save nearly all patients. They used to lose nearly all.”—PROF. PALMER, of Michigan University.

Dr. Palmer recommended the expectant treatment. He also stated that, in Edinburg, instead of narcotics the patient is given a glass of water with the assurance that it will make him sleep, which it usually does.

Alcohol for Mothers.

It has become a notorious fact that the use of stimulants by women is increasing very rapidly, and the evil has already acquired alarming proportions. It has doubtless very largely arisen from the practice of physicians and nurses of recommending wine and beer to nursing mothers. The habit thus acquired, is continued.

But the mothers are not the only victims. A large share of the alcohol finds its way out of the system in the milk, and in this way delicate babes are kept in a state of semi-intoxication from birth until they are weaned. A mother finds her child nervous and fretful. She takes a glass of ale an hour or two before nursing the infant, and is pleased to find that he becomes quiet. She little dreams that his quietude is only the stupid narcotism of alcohol poisoning; yet such is the truth. Every one knows that a dose of castor oil given to a nursing mother will

affect the child as promptly as the mother. The same is true of alcohol; but the delicate organization of the infant is far more susceptible to its poisonous influence than the mother's system. Dr. James Edmunds says that a large majority of English ladies use stout while nursing, so that their infants "are never sober from the earliest period of their existence until they have been weaned."

Beginning life under such a regimen, is it any wonder that so large a number of young men, and young women also, develop into drunkards? Such a result is only the fruit of the seeds sown in earliest infancy. The ancient Romans were so well aware of this fact that the use of alcoholic drinks was by law prohibited to a Roman mother while an infant was dependent upon her for support.

What Does Experience Prove?

The testimony of many eminent physicians is that the use of alcohol as a supporter of vitality, a tonic, or a stimulant, is wholly unnecessary.

In London, there is a temperance hospital under the charge of Dr. James Edmunds, who delivered a very interesting series of lectures on this subject in New York City a year or two since. In this hospital, all alcoholic medicines are excluded "without incurring any risk or delay in recovery, and with advantage rather than detriment." The death rate, from the first establish-

ment of the hospital, has been but six per cent., a rate far below that of other hospitals. Of more than three hundred surgical cases which are generally supposed to especially demand alcohol, not a single one proved fatal without it.

Says Prof. Miller, M. D., of Scotland, "Alcohol cures nothing."

Dr. Higginbottom said before the British Medical Society, "I have never known a disease cured by alcohol."

Dr. Johnson, an English physician, says that alcoholic liquors are, "as medicines, wholly unnecessary."

A few years ago, two thousand English physicians publicly expressed their disapproval of the use of alcohol as a medicine.

In London alone three hundred physicians signed a petition for the suppression of the liquor traffic, "alcoholic drink being, in their opinion, wholly unnecessary for medical purposes."

Medical testimony against the use of alcohol might be presented at much greater length if it were necessary. We wish it distinctly understood that in disapproving of the use of alcohol as a medicine, we do not advocate the use of poisonous substitutes, though even this course might in many cases be preferable. Most of the arguments which have been adduced against the use of alcohol are equally valid against all poisons. There are numerous other arguments which the present limits forbid us to

mention, but which may be found presented in other connections.

We will conclude with a brief summary of the arguments adduced against the employment of alcohol as a medicine.

Summary of Arguments against Alcoholic Medication.

1. Its medical properties are due to the fact that it is expelled from the body, and to the manner in which it is expelled.

2. It is a poison in all doses, and is treated as such by the system.

3. It is in no sense a food.

4. It does not supply force nor support vitality.

5. It wastes force and vitality.

6. It is a poison to the sick as well as to the well.

7. Its effects upon the body are always injurious. It lessens sensibility, and occasions the destruction of the tissues.

8. It does not prevent or cure disease.

9. Its common use in medicine as a stimulant or supporter of vitality, or nerve force, is entirely unnecessary and unjustifiable, and is productive of a vast amount of harm.

10. The only cases in which its use could possibly be of any benefit are those which require the momentary application of an irritant to prevent death from sudden collapse by exciting the vital energies.

WINE AND THE BIBLE.

Perversion of Scripture.

AMONG civilized nations, the Bible is almost universally admitted to be at least an admirable code of morals, even by those who do not regard it as an inspired book. An authority held in such high esteem would necessarily have very great influence in molding the judgments of men and forming their opinions. It is for the purpose of gaining the support of this generally accepted authority that the adherents of any special theory or doctrine appeal to the Scriptures for testimony in favor of the same. It need not be at all surprising, then, that the language of Holy Writ should often be grossly perverted by enthusiasts and unscrupulous persons in their attempts to find for their pet theories the needed indorsement. Illustrations of this use of the Scriptures are very abundant. A large class of modern agitators who call themselves "social reformers" and have made themselves notorious by the laxity of morals advocated and practiced by them, claim to find in the Word of God license for their immorality. Polygamists, likewise, appeal to inspiration in support of their unchristian practice. Only a few years ago, American slavery received from thou-

sands of pulpits a most vigorous support which claimed to have the sanction of divine authority.

At the present time there is a powerful party who claim that the use of fermented, or intoxicating, liquors is permitted and even sanctioned by the Bible. This party is headed by a few eminent scholars and clergymen, who are chiefly supported by a promiscuous throng of rich rum-sellers, respectable moderate drinkers, and gutter drunkards.

If it can be proven that the Bible favors the use of intoxicating drinks in any degree, then the infidel has placed in his hands a most powerful weapon with which to attack the authenticity and sacredness of the Scriptures. If, on the other hand, it can be shown that there is no such conflict between science and common sense, and inspiration, then the difficulty vanishes. A careful examination of the subject will convince any candid man that the support which the advocates of the use of liquor claim to derive from the Bible is wholly imaginary ; and that the use which is made of the Scriptures in defense of intemperance is a most flagrant perversion of the language and import of inspiration.

The Bible in Harmony with Science.

Inspiration, true science, and sound common sense always agree. Any apparent conflict arises either from a misunderstanding of the meaning of the language employed, or from an imperfect knowledge of the scientific facts supposed to ne-

cessitate a disagreement. Science says distinctly and unequivocally, All fermented drinks contain alcohol ; alcohol is a poison *under all circumstances and in all doses*. The decision of science is sustained by that of reason ; for common sense teaches that a substance with properties like those possessed by alcohol can be nothing else than poisonous. If it is true that the Bible teaches that alcohol—in the form of wine, or otherwise—is good and harmless, then it will be made to appear that inspiration is less wise than reason and science ; that man, the creature, has outstripped the Creator in knowledge.

Such a conclusion, though correctly drawn from the premises, is too absurd for belief by one who has a modicum of faith in inspiration ; and its manifest falsity would seem to be sufficient to fully expose the weakness of those who would make the Bible responsible for intemperance. The utter worthlessness of all arguments in favor of the use of alcoholic drinks founded on the Bible becomes still more apparent by a careful examination of the character of the wines mentioned in the Scriptures, and a consideration in detail of the texts which are claimed to be favorable to the use of alcoholic liquors.

Two Kinds of Wine Recognized in the Bible.

It is undoubtedly true that intoxicating liquors are mentioned in the Bible ; and it is equally true that a kind of liquor or wine is recognized and often mentioned which is not intoxicating.

Ancient historians preserve the same distinction, making frequent reference to intoxicating wine and its effects, and also to unintoxicating wine and its wholesome properties.

Unintoxicating Wine. The intoxicating property of wine is due to the alcohol which it contains. Wine which contains no alcohol is unintoxicating. Alcohol is produced only by fermentation. Wine which has not undergone fermentation, then, is unintoxicating, since it contains no alcohol. All that is required to preserve wine free from alcohol, and thus from intoxicating properties, is to prevent fermentation. That the ancients were acquainted with several modes of preventing fermentation, is clearly shown by reference to history. Ancient historians describe four principal methods of effecting this, which were as follows :—

1. *Boiling.* In order that sweet fluids should ferment, it is necessary that a certain amount of water should be present. If a portion of the water is removed, fermentation cannot take place. This is easily effected by boiling; and this method was very commonly practiced among the ancients. The fresh juice of the grape was boiled until a considerable portion of the water was evaporated. Sometimes the boiling was continued until the juice acquired the consistency of sirup. This same method is employed now in the preservation of cider, and the sweet juice of the maple-tree and the sugar-cane, which would speedily ferment and produce alcohol if

left in their natural state, but can be preserved any length of time in the form of sirup or molasses.

According to Pliny and Virgil, the Romans preserved wine in this way. Pliny mentions wine which had been preserved in this manner and was perfectly sweet, and of the consistency of honey, though two centuries old.

Aristotle states that "the wine of Arcadia was so thick that it was necessary to scrape it from the skin bottles in which it was contained, and to dissolve the scrapings in water."

"The Mishna [a collection of ancient Jewish writings held in the highest esteem by the Jews] states that the Jews were in the habit of using boiled wine."—*Kitto*.

2. *Filtration*. The fermentation which develops alcohol in a sweet fluid by decomposing its sugar, is largely dependent upon the presence of albumen and certain impurities. These were carefully removed by repeated filtration, after which the purified juice was placed in bottles or casks which were carefully sealed and buried in the earth or submerged in water and thus kept cool and sweet.

3. *Subsidence*. The ingredients of fresh juice which aid in exciting fermentation were also removed by keeping the juice sufficiently cool to prevent fermentation until they had settled to the bottom, when the clear liquid was poured off and carefully bottled as after filtration.

4. *Fumigation*. Sulphur is a powerful anti-

septic. The ancients were familiar with this fact, and often preserved the juice of the grape from fermentation by subjecting it to the fumes of sulphur, or by adding to it the yolk of eggs, mustard seed, or other substances containing sulphur. The same methods are now in use for preserving cider.

The fresh juice of the grape or any other sweet fruit, when treated in any one of the above ways, is entirely free from any intoxicating property, and is not only harmless, but palatable and nutritious. Says Prof. M. Stuart, "Facts show that the ancients not only preserved their wine unfermented, but regarded it as of a higher flavor and finer quality than fermented wine."

Intoxicating Wine. As already stated, the intoxicating element of wine is alcohol, which is produced by the decomposition of sugar in the process of fermentation. Alcohol can be made from any juice which contains sugar. The ancients made intoxicating drinks from millet, dates, beans, palm juice, pears, figs, pomegranates, and other fruits, besides the grape. These liquors were known to the Jews, and are frequently referred to in the Scriptures. In Prov. 23:31, we have a striking reference to the fermentation of wine, as follows, according to Dr. Kitto's translation: "Look not thou upon the wine when it is turbid, when it giveth its bubble in the cup, when it moveth itself upright."

Scriptural Distinctions of Wines.

In the English version of the Scriptures, the distinctions made in the original are often obscured or wholly lost. This is especially true in the present instance. In the Hebrew, the language in which the Old Testament was written, different kinds of wine are indicated by different words, which are all rendered in the English translation by the one word wine. The principal words thus employed are יַיִן, *yayin*, שֵׁכָר, *shekar*, and תִּירוֹשׁ, *tirosh*.

Yayin, according to Biblical critics, refers to the juice of the grape in any form. It might be sweet or sour, fermented or unfermented.

Shekar, or *shechar*, was the term applied to any sweet juice derived from any other source besides the grape. It is sometimes translated honey. It usually refers to the juice of the palm tree or of its fruit, the date; and, like *yayin*, it included the fermented as well as the unfermented condition of the juice.

Tirosh was applied to the ripe fruit of the vine, and to the fresh juice of the grape before fermentation had begun. It is often translated "new wine."

In brief, then, *yayin* means fermented or unfermented wine or juice of grapes; *shekar* means fermented or unfermented wine or juice of the palm tree, of dates or other sweet fruit. *Tirosh*

means the sweet, unfermented juice of the grape, or new wine.

The Hebrews used the term *yayin* for wine made from grapes, in any of its stages, just as we apply the term cider to the fresh juice of the apple, or to the same juice after it has fermented or become "hard" by age. The Greek *οἶνος*, *oinos*, corresponds exactly with the Hebrew *yayin*.

The foregoing is certainly sufficient to show, beyond all chance for reasonable doubt, that there are two kinds of wine recognized in the Bible, one of which was sweet, unfermented, and unintoxicating, and the other fermented and intoxicating. The same term is often used for both kinds. If, then, we find the Bible in some instances speaking of wine in terms of commendation, and in others condemning it in the most forcible manner, would it not be most reasonable to suppose that in those cases in which wine is commended, the unfermented kind is referred to? and in those in which it is condemned, that which had undergone fermentation is meant? Any one who has confidence in the inspired character of the Scriptures will have no hesitancy in answering in the affirmative.

We are now prepared to consider some of the texts in which wine is mentioned.

EXAMINATION OF TEXTS.

1. Texts which Are Said to Favor the Use of Wine.

Num. 28 : 7. “In the holy place shalt thou cause the strong wine to be poured unto the Lord for a drink-offering.”

Whatever semblance of argument may be founded upon this text loses all its force upon reference to the original. The term which is here rendered “strong wine” is *shekar*, which might with much greater propriety be translated “sweet wine,” since that is the literal meaning of the word. It is so rendered by Kitto, who says that the article referred to in this text was a sweet juice derived from the palm tree or any sweet fruit other than the grape. That this position is correct is conclusively proven by the testimony of an eminent Jewish rabbi, who says of the Jews, “In their oblations and libations, both public and private, they employ the fruit of the vine ; that is, fresh grapes and unfermented grape juice.” “Fermentation is to them always a symbol of corruption.”

According to Plutarch, even the Egyptians used only unfermented wine in sacrifices.

Judges 9 : 13. “Wine which cheereth God and man.”

The wine referred to here cannot be the fermented kind, for the original word so rendered is *tirosh*, which, as previously shown, was always applied to grapes themselves or to the fresh juice.

Some learned Bible commentators hold that the word refers exclusively to the whole ripe fruit. Travelers in wine-producing countries assert that the fresh juice of the grape has a peculiarly refreshing effect when taken cool, and that any quantity can be drunk without any of the effects of fermented wine.

Ps. 104 : 14, 15. "He causeth the grass to grow for the cattle, and herb for the service of man ; that he may bring forth food out of the earth ; and wine that maketh glad the heart of man, and oil to make his face to shine," etc.

The wine referred to here must be of the un-intoxicating kind, for it is represented as being a natural product, like grass, the herb, and oil. Fermented wine is not a natural result of growth. The Creator never made alcohol in any form. Not a single plant contains it. It is the product of decay and rottenness. As remarked in reference to the preceding text, new wine is a most refreshing and cheering beverage.

Prov. 31 : 6. "Give strong drink unto him that is ready to perish."

Even this text is sometimes used as an apology for the use of liquor, though at the most it could be made to excuse the use of strong drink only in cases of threatened death. An understanding of the real meaning of the text clears up all difficulty attaching to it.

The term, "strong drink," had no reference to distilled liquors, as in present usage. The art of distillation was unknown to the ancients, not

being discovered until the ninth century of the present era. Strong drink, then, did not mean a liquor strong in alcohol, like brandy or rum. It referred to a liquor, sometimes called "mixed wine," which was a compound of wine with wormwood, myrrh, nux vomica, and narcotic drugs, which rendered it very intoxicating. It was customary, among ancient nations, to administer this strong, or intoxicating, liquor to criminals who were about to be executed, in order to stupefy them and thus mitigate their pain. In obedience to the common custom, a draught of this powerful opiate was offered to the Saviour, as he hung upon the cross. It was to this well-known custom that the wise man had reference when he said, "Give strong drink unto him that is ready to perish," just as the surgeon would say, Give chloroform to a patient about to undergo a surgical operation.

Matt. 11 : 19. "The Son of man came eating and drinking, and they say, Behold a man gluttonous, and a wine-bibber," etc.

It will not be denied that Christ drank wine; but there is not the slightest evidence that he ever drank a single drop of fermented wine. Sweet wines which had been preserved by some one of the methods previously described, were by many persons drank to excess, just as food may be taken in excessive quantity. Such persons were called wine-bibbers, though they could not be called drunkards. But there is no evidence that Christ belonged to this class. The charge

was made by wicked men, his enemies, who also accused him of gluttony, and on another occasion said, "He hath a devil." Was he a glutton? If not—and he certainly was not—how can it be claimed that he was a wine-bibber? The same authority which would prove him to be a wine-bibber, would also make him a glutton and one possessed of a devil.

It is a fact well worthy of notice and serious consideration in this connection, that the Saviour refused to drink the intoxicating liquid which was placed to his lips as he hung upon the cross, even though he was at that very moment suffering the keenest tortures that fiends in human shape could subject him to. In face of such an evidence of his teetotal integrity, how can some still persist in reiterating the ancient charge that he was "a wine-bibber."?

John 2: 9, 10. "When the ruler of the feast had tasted the water that was made wine, and knew not whence it was (but the servants which drew the water knew), the governor of the feast called the bridegroom, and saith unto him, Every man at the beginning doth set forth good wine; and when men have well drunk, then that which is worse; but thou hast kept the good wine until now."

a. If the wine referred to above was of an intoxicating nature, then the brewer and the distiller have, as they claim, a sufficient apology for their nefarious business; for in manufacturing alcohol with which to poison their fellow-men, ruin their constitutions, squander their property, and render their children homeless and their

wives widows—in all this work of evil, they are only imitating the example of their divine Master! Such a position is too unreasonable to be tenable; for the work of rum savors more of a Satanic than of a divine origin. No; it is impossible for any one but the veriest infidel to regard it consistent for the Saviour of mankind to lend his influence, his example, in favor of a practice which even human wisdom can see is an unmitigated curse to the race.

b. But how was this miracle wrought? It was simply by a shortening of the natural process by which wine is produced. The grape-vine sucks up water through its rootlets, and by a slow and mysterious process continuing through several months finally converts it into wine in its clusters of luscious fruit. Man obtains it by simply pressing it from the grapes. Christ, by his infinite wisdom, by his knowledge of the intricate processes carried on by the plant, for he made the grape-vine, performed the same work in a moment. The product was the same as though it had been produced in the ordinary way. Is the product of the vine, new wine, fresh grape juice, fermented or intoxicating? No; it is unfermented and wholesome. The grape-vine cannot produce alcohol. The Creator has not formed it in any plant. In simply shortening the natural process of wine-making, then, Christ produced not fermented but unfermented wine.

c. Again, the governor of the feast pronounced the wine produced by Christ the best, saying,

“Thou hast kept the *good* wine until now.” If we can ascertain which kind of wine was considered *best* among the Jews, we shall be able to settle this question with absolute certainty. An appeal to recognized authority will do this.

Says Dr. Jacobus, “Those were considered the best wines which were least strong.”

Prof. M. Stuart says that the ancients regarded unfermented wine “as of a higher flavor and finer quality than fermented wine.”

Kitto says of wine which had been preserved from fermentation by boiling, “Such was esteemed [by the Jews] the richest and the best wine.”

There can be no doubt, in view of such testimony, that the wine which Christ made, and which the governor of the feast pronounced the best, was the unfermented kind, which was commonly considered the best among the Jews.

d. Lastly, Dr. Isaacs, an eminent Jewish rabbi, bears the following testimony: “The Jews do not, in their feasts for sacred purposes, *including the marriage feast*, ever use any kind of fermented drinks.”

The Passover Wine.—Was the wine used by Christ and his disciples at the passover supper, just before the crucifixion, fermented or unfermented?

This is an interesting question; for all Christendom have for hundreds of years acted upon the supposition that the wine employed was fermented, and have used this kind of wine in

the sacrament. If we can ascertain with certainty the character of the wine employed by the Jews in the passover feast, we shall be able to settle this question satisfactorily. Can we do so? The following facts seem to make the matter sufficiently clear:—

a. The process of fermentation is one of putrefaction or decay. The ancients understood this, and were also acquainted with the fact that fermentation is occasioned by leaven or ferment.

b. Not only leavened or fermented *bread* was forbidden during the passover, but all fermented *things*. Says Kitto, “All fermented *substances* were prohibited during the paschal feast of the Jews, and during the succeeding seven days.” Hence, the passover was called the “feast of the unleavened,” the word bread being not found in the original.

c. If the body of Christ was necessarily represented by bread which was absolutely free from ferment or leaven, surely his blood—“which is the life”—should be represented by wine equally free from putrefactive elements.

In view of the above facts, we are certainly justified in the belief that the wine used by our Lord was wholly free from alcohol.

Communion Wine.—The arguments adduced to show that the passover wine was unfermented, are equally cogent in proving that the wine used by our Lord at the institution of the sacrament was also unfermented. The bread and wine are for the same purpose—to represent the body and

blood of Christ—in the communion and in the passover service.

Cases have occurred in which reformed drunkards have, by tasting the alcoholic wine commonly used in communion service, been driven back to the cup and the gutter by the maddening desire for drink which had been once smothered, but was revived with fatal energy by the one small sip of the fascinating poison. It is an evidence of progress that many of the most influential churches have recently substituted unfermented for fermented wine in communion service.

1 Tim. 4 : 4. “For every creature of God is good.”

Fermented wine is not a “creature of God.” It is the poisonous product of a destructive process, and not the result of a creative act, so that it can in no sense be called a “creature of God.” Unfermented wine, the fresh juice of the grape, is certainly good and wholesome, and it may with propriety be called a “creature of God ;” for it is one of the products of his hands, as shown by Ps. 104 : 14, 15.

1 Tim. 5 : 23. “Drink no longer water, but use a little wine for thy stomach’s sake.”

This text is regarded by moderate drinkers as their stronghold. Whenever reasoned with on the subject, they quote Paul’s advice to Timothy and apply the same to themselves irrespective of the state of their stomachs. In the great ma-

jority of cases, the stomach makes no complaint until after the habit of wine-taking has been formed. This fact alone is quite significant, but we would invite the attention of those who seek consolation from this text to the following points :—

a. The fact that it was necessary for Paul to advise Timothy to “drink no longer water, but wine,” proves conclusively that Timothy was not in the habit of drinking any kind of wine.

b. Paul recommended wine as a medicine for Timothy on account of some weakness of his stomach, and other infirmities. This would not be recommending it for the habitual use of well persons.

c. The wine which Paul recommended was such as would be good for Timothy’s stomach, else he would not have advised him to use it. Alcoholic drinks are notoriously bad for even a healthy stomach. They interfere with digestion, and are one of the most prolific causes of dyspepsia. Unfermented wine, on the other hand, has just the opposite properties. It is a most wholesome article, and was much esteemed by the ancients for the very purpose for which Paul recommended wine to Timothy. The conclusion is irresistible, then, that the kind of wine recommended by Paul was the unfermented juice of the grape. This position is confirmed by Athenæus, who recommends sweet wine “as being very good for the stomach.” Paul certainly could not have recommended fermented wine to Tim-

othy, for Pliny, Philo, and Columella, in speaking of fermented wines, say that they *produce* "headaches, dropsy, madness, and *stomach complaints*." Who will believe that Paul advised Timothy to use the very article that would cause his stomach to become diseased if it were not already so?

1 Tim. 3:8; Titus 2:3. "Not given to much wine."

Moderate drinkers claim to find in these and similar texts ample support for their practice. They argue that Paul did not condemn the use of wine entirely, but only its excessive use. In 1 Tim. 3:3, Paul says, "Not given to wine," no qualifying word being used. The other expressions evidently do not mean that the use of intoxicating wine in any degree would be allowable. If such a rule of interpretation as moderate drinkers adopt were followed in explaining other similar expressions, we should have some very strange doctrines taught. For example, we read, in Eccl. 7:17, "Be not *over-much* wicked." According to the rule referred to, we must understand this to mean that a man may sin in moderation if he is careful to avoid becoming excessively wicked. Such a doctrine would be fatal to Christianity, and is obnoxious to reason. Any degree of indulgence in sin is wrong. Any degree of indulgence in intoxicating drinks is also wrong.

We may allow a literal interpretation of the text by reference to the fact that even unfermented wine may be used in excess, just as food

may be indulged in to a gluttonous extent. Such use of wine may have been referred to by the apostle.

Let us now consider

2. Texts which Discountenance the Use of Wine and Fermented Liquors.

As already remarked, having shown that two kinds of wine are recognized in the Bible, one of which was wholesome, the other harmful—though often referred to by the same terms—it is most reasonable to suppose that when wine is spoken of in terms of commendation, that which was wholesome is referred to; and when the opposite terms are employed, the contrary kind of wine is meant. This principle should be borne in mind in considering the following scriptures, which are a few of those which condemn the use of wine and strong drink:—

Prov. 20 : 1. “Wine is a mocker, strong drink is raging; and whosoever is deceived thereby is not wise.”

No language could better describe the real character of wine and strong drink than the words of the wise man. “Wine is a mocker;” or in other words, a deceiver. It deludes the drinker with the fancy that it does him good, while it is all the time sapping his life and leading him to certain ruin.

Isa. 5 : 11. “Woe unto them that rise up early in the morning that they may follow strong drink; that continue until night, till wine inflame them.”

There is no solace here for the drunkard. In addition to the immediate ills which he brings upon himself by his revelings, the Almighty has pronounced a woe upon him.

Prov. 23 : 21. “For the drunkard and the glutton shall come to poverty.”

Every one has seen the truth of this scripture repeatedly exemplified in the downward career of the drinker, who sinks from bad to worse, squanders his property, and not infrequently dies at last in the poor-house or on the public highway.

Prov. 23 : 29, 30. “Who hath woe? who hath sorrow? who hath contentions? who hath babbling? who hath wounds without cause? who hath redness of eyes? They that tarry long at the wine; they that go to seek mixed wine.”

The truthful picture which inspiration has here drawn of the real experience of the drunkard is in strong contrast with the glowing descriptions of delightful exhilaration and pleasurable sensations which the tempter gives as the effects of alcohol. No one will dispute the accuracy of the inspired word who has carefully observed the effects of wine.

Prov. 23 : 31, 32. “Look not thou upon the wine when it is red, when it giveth his color in the cup, when it moveth itself aright. At the last it biteth like a serpent, and stingeth like an adder.”

The wise man here gives a very precise description of fermented wine, and then admonishes us that we should not even look upon it,

much less taste it. Surely, this is countenancing the most rigid total abstinence. How can moderate drinkers who believe in the divine origin of the Bible continue to indulge in even the mildest fermented liquor, in the face of this admonition?

Rom. 14 : 13. “But judge this rather, that no man put a stumbling-block or an occasion to fall in his brother’s way.”

This text does not mention wine, but it is a very powerful rebuke to those moderate drinkers who maintain that it is only the excess of wine that is harmful, and that so long as they indulge moderately, no one has the right to question the propriety of their course. Some persons may possess sufficient will power to enable them to continue a course of moderate tippling for many years; but their example in using wine will lead to perdition many less resolute persons who have likewise begun as moderate drinkers, but, lacking power to control the appetite for drink, end their career in drunkards’ graves. The Bible makes the moderate drinker in great degree responsible for the sins and excesses of his weaker brother who fell through attempting to follow an example which he lacked the power to fully imitate.

Good Wine and Bad Wine Contrasted.

Here are the qualities of good and bad wine contrasted :—

BAD WINE.

Fermented.
 Contains alcohol.
 Poisonous.
 Intoxicating.
 Produced by decay.
 A symbol of wrath.
 "Wine is a mocker."
 "Look not thou upon the
 wine when it is red."
 "Strong drink is raging."
 "Poison of dragons."
 "Cruel venom of asps."
 "Biteth like a serpent and
 stingeth like an adder."
 "Woe unto him that giveth
 his neighbor drink, that put-
 test thy bottle to him."

GOOD WINE.

Unfermented.
 Contains no alcohol.
 Wholesome.
 Unintoxicating.
 Produced by natural growth.
 A symbol of blessing.
 "Cheereth God and man."
 "Use a little wine for thy
 stomach's sake."
 "Maketh the heart glad."
 "And he took the cup, and
 gave thanks, and gave it to
 them saying, Drink ye all of it."

Use of Wine by Bible Characters.

If it is still persisted that wine of a intoxicating nature was used by some of the most eminent characters of the Bible, we have only to glance at the effects to see the absurdity of making such a course an example to be followed. It will be found that the effects were notably evil whenever any effects whatever are recorded.

Noah's Drunkenness.—"And Noah began to be an husbandman, and he planted a vineyard: and he drank of the wine, and was drunken; and he was uncovered within his tent." Gen. 9:20, 21. This is the very first mention of wine in the Bible. Its effects upon Noah show that it was intoxicating. It so muddled the brain of

this great and good man that he lost all sense of propriety, and fell into a state of insensibility in his tent, in a condition of indecent exposure. This unfortunate occurrence also became the occasion of national misfortune to one line of Noah's descendants, through the disrespect of one of his sons. No doubt, the first effect of the wine was exhilarating. Doubtless, it dispelled from Noah's mind all anxiety about the future prosperity of his extensive plantation, which was to be repeopled, resubdued, and tilled by himself and his descendants. But that it also blunted those other finer sensibilities of his nature, which should always be acute and active, is quite apparent. Surely, then, there can be nothing here to recommend the use of wine.

Lot's Shame.—The next undisputed mention of wine is in Gen. 19:32–36. In this instance, the wine employed was doubtless of the kind called “mixed wine,” which possessed most powerful intoxicating properties. The effects in this case were anything but such as would recommend the use of wine; for they led the righteous Lot—who had dwelt in Sodom so many years, surrounded with wickedness, yet preserving his integrity—to commit a crime even worse than that for purposing which the lecherous Sodomites were smitten with blindness.

Nadab and Abihu.—These two sons of Aaron, while under the influence of drink, were so presumptuous as to directly disobey the express

command of the Almighty by offering strange fire upon the sacred altar. In consequence of this daring act of disobedience, they were suddenly smitten with death by the hand of the Lord, who evidently designed by this summary act of justice to render them an example to succeeding generations. This is a most striking illustration of the influence of alcohol to render the mind incapable of distinguishing between sacred and common things. It has an unmistakable influence to blunt the moral sensibilities of men.

It certainly will not be argued that in any of these instances the use of fermented, or intoxicating, wine was beneficial.

Bible Teetotalers.

While there is no evidence in the Bible that the use of intoxicating wine ever did, or ever could do, any one the slightest possible good, we have the illustrious example of some of the most eminent Bible characters as teetotalers.

The Israelites.—During the sojourn of the children of Israel in Egypt, they were, undoubtedly, total abstainers, since their masters, the Egyptians, at that time made no use of any fermented liquor. During their journey in the wilderness, the Israelites were of necessity abstainers, their only drink being the purest water from the rock.

The Nazarites.—With the establishment of the Jewish ceremonial law, there was insti-

tuted an order of teetotalers. They were called Nazarites. They dedicated themselves wholly to the service of God; and one of the conditions of the dedication was total abstinence from the use of wine. To insure a perfect observance of the pledge, all wine was prohibited, whether fermented or unfermented. Many of the finest personages of the Bible were members of this class. It is quite probable that Daniel and his three Hebrew brethren were Nazarites, since they refused to drink the king's wine.

Samson.—This Hebrew Hercules was a teetotaler from his birth. None of his muscles were weakened by alcoholic degeneration. None of his nerves were paralyzed by stimulants. He was a Nazarite, and is a fair illustration of the incompatibility of alcohol with strength. Milo, the famous Greek who rived Samson in his prodigious strength, was likewise a total abstainer, as well as a vegetarian.

The Rechabites.—These were a sort of family temperance society. They abstained from the use of wine because commanded to do so by their father; and the Lord commended them for their constancy. If the sons of the present age were as careful to follow the commands of their fathers as were those of ancient times, there would certainly be fewer drunkards. But drink deprives a youth of natural affection. It leads him to trample upon the authority of his father, and treat with contempt the prayers and tears of

a loving mother. What a terrible monster is drink!

The Essenes.—The class of Jews known by this name were very temperate in all their habits. They were strict teetotalers, carefully avoiding the slightest indulgence in fermented drinks. They were noted for their rigorous piety. It is thought by many that John the Baptist was a member of this class. He was a Nazarite, at least, and thus a teetotaler.

Timothy must have been a total abstainer, since it was necessary for Paul to advise him to take a little wine (sweet wine) for his "stomach's sake." There would have been no propriety in such advice had he been in the habit of using wine.

History, as well as the Bible, furnishes numerous examples of temperance. Pythagoras, one of the most renowned philosophers of ancient times, was an advocate of total abstinence. Neither himself nor his followers made use of wine. Wine was prohibited to those who were training for competition at the national games. It appears evident, indeed, that there have always been societies analagous to temperance societies, or organizations opposed to the use of intoxicating drinks. There are, even at the present day, barbarous tribes the individuals of which are strict abstainers, the use of wine being prohibited by their religion.

Summary of Bible Relation to Temperance.

The relation of the Bible to temperance may be summed up in the following brief conclusions, to which the evidence presented must lead us:—

1. The use of intoxicating drinks is not commanded in the Bible.

2. The use of fermented wine is not recommended.

3. Its use is not countenanced either as a harmless practice or a necessary evil.

4. Total abstinence is nowhere condemned.

5. Many texts commend abstinence, and some command it.

6. There is nothing in the Scriptures which disagrees with the principles of total abstinence, and nothing which sustains moderate drinking.

7. Hence, the Bible agrees with science and common sense in denouncing the use of intoxicating liquors, and commending temperance.

In the face of these facts, can any person who has a particle of faith in the inspiration of the Scriptures, and in man's accountability to his Creator, continue to indulge in the use of wine *in any degree whatever?*

We cannot see how it would be possible for an individual to do so and still preserve "a conscience void of offense."

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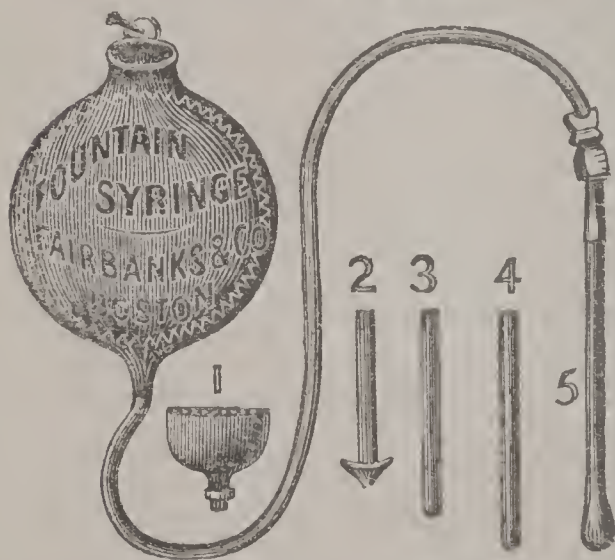
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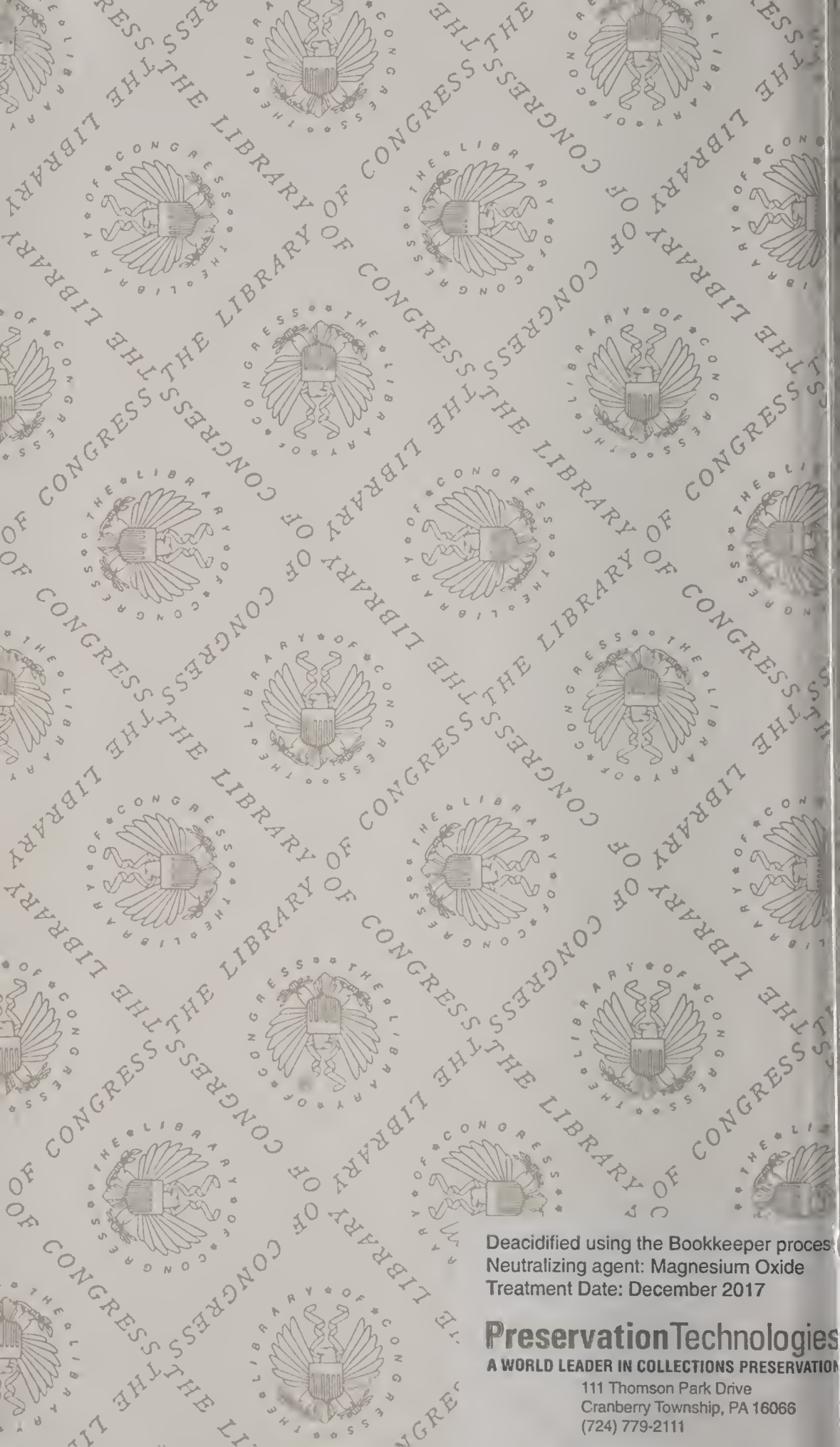
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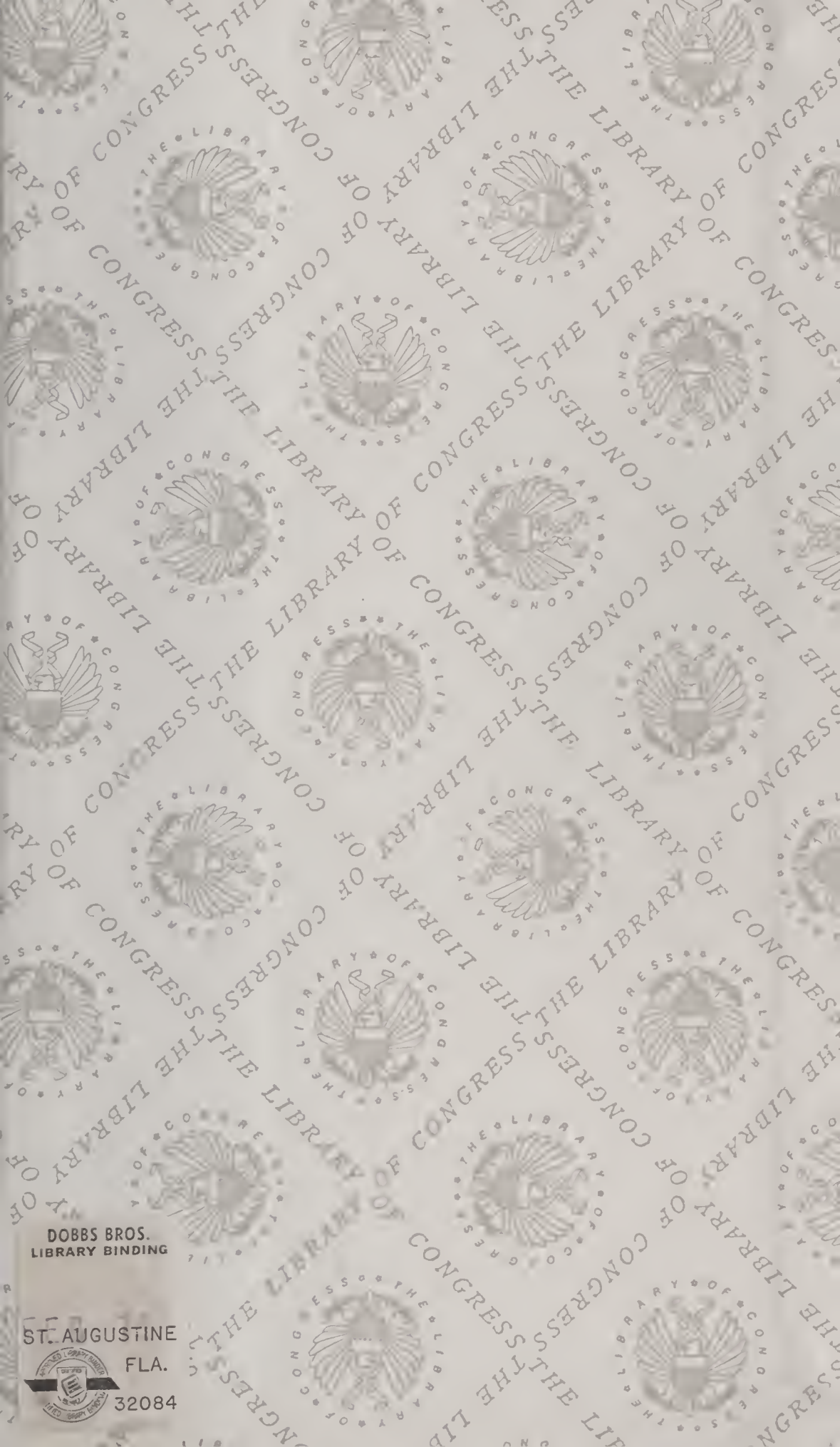
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